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# INTRODUCTION AND ORGANISATION STRUCTURE

## INTRODUCTION

The Marine Institute is the national agency for marine research, technology, development & innovation (RTDI). We seek to assess and realise the economic potential of Ireland's vast marine resource; promote sustainable development of marine industry through strategic funding programmes and essential scientific services; and safeguard Ireland's natural marine resource through research and environmental monitoring.

Ireland has a marine resource of 220 million acres under the sea, which is over ten times its land area and largely undiscovered. The Marine Institute is the State agency responsible for promoting the sustainable development of this vast marine resource through research, and providing management advice to industry, the Government and EU.

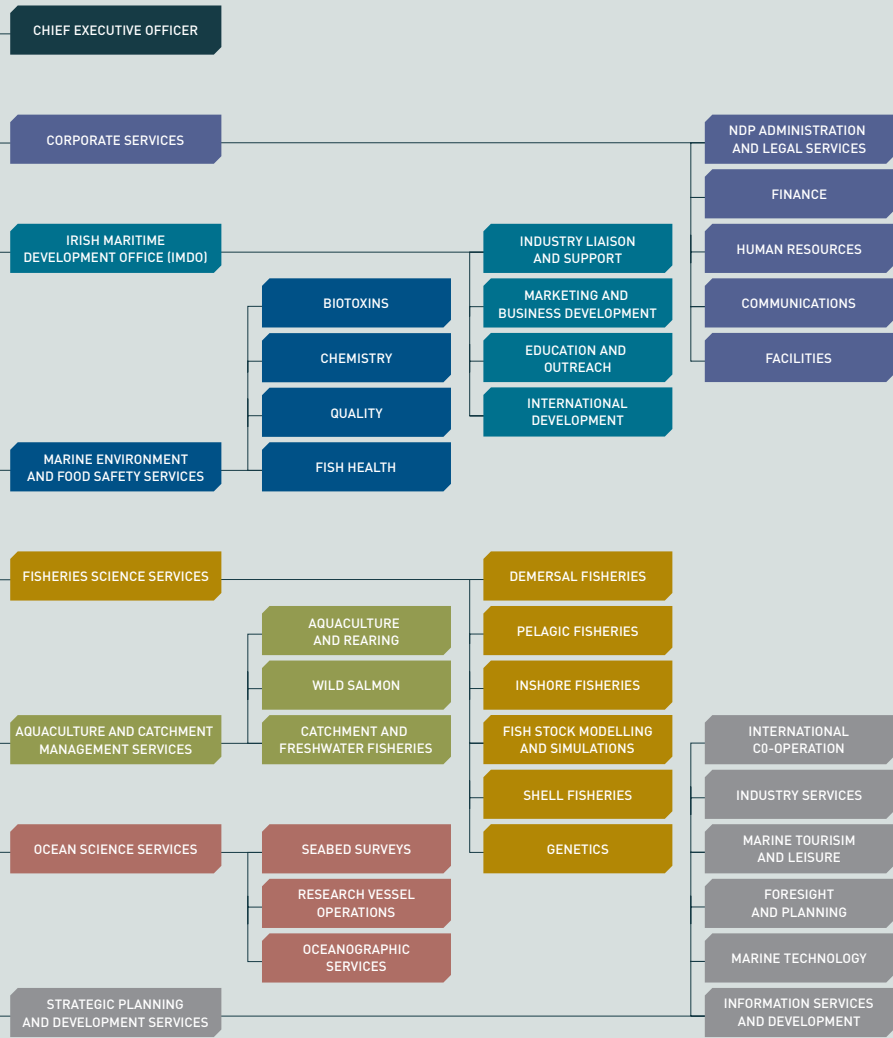
The Institute provides essential marine research services including:

- National research and development funding programmes
- Fish stock assessment
- Fish health services
- Marine food safety monitoring
- Environmental monitoring
- Research vessel operations
- Seabed mapping
- Data management

To provide these services to the highest degree of excellence, and to plan for future developments, the Institute is structured into seven Service Teams, as outlined below.

This report highlights the key deliverables and progress made towards our vision during 2005.

## ORGANOGRAM



# BOARD MEMBERS

- 1. Mr. Kevin Bonner (Chairman) (2005 – 2008)**  
Kevin Bonner was educated at University College Dublin (BA), Trinity College Dublin (MSc Econ) and the King's Inns (Dip Legal Studies) and has spent most of his career in the Irish civil service, which he joined in 1967. He retired in 1997 as Secretary General of the Department of Enterprise, Trade and Employment, a Department with a budget of €1.5 billion, and 1000 policy-oriented staff employed directly and 4000 indirectly in the Department's agencies – IDA, Enterprise Ireland, Foras, FAS (Training Agency), Competition Authority, Patents Office, Labour Court, Labour Relations Commission, Health and Safety Authority, etc. Mr. Bonner has been a member of National Economic and Social Council and the Council of the Economic and Social Research Institute.
- 2. Mr. Fergus Cahill (1996 – 2006)**  
A former Naval Officer and Chief Executive of the Irish National Petroleum Corporation (INPC), Mr. Cahill is currently Chairman of the Irish Offshore Operators' Association and Marine Technical Development Services Ltd..
- 3. Ms. Mary Dooley (2002-2007)**  
A Fellow of the Institute of Chartered Accountants in Ireland, a member of the Financial Executives Association and of a number of commercial, cultural and charitable organisations. She has held senior management positions in the entertainment, pharmaceutical, health and educational industries in Ireland, working with Ryan Hotels Plc., Warner Communications Inc., Bristol Myers Inc., St. James Hospital and the National University of Ireland, Galway.
- 4. Mr. Richie Flynn (2001 – 2006)**  
Mr. Flynn is currently the executive secretary of the IFA's Fish Farming Section, incorporating the Irish Salmon Growers' Association and the Irish Shellfish Association. He holds the position of Chairman of the EU Commission's Aquaculture Advisory Committee and of the Environment Committee of the Federation of European Aquaculture Producers (FEAP).
- 5. Captain Dave Hopkins FNI, IIMM (2000 – 2006)**  
A master mariner since 1976, Capt. Hopkins is Director of the marine services group Irish Mainport Holdings, President of the Irish Chamber of Shipping and Vice President of the International Federation of Shipmasters. He is also a member of the board of Advisory Board of the Irish Maritime Development Office and a council member of the Emergency Rescue and Recovery Vessel Association.
- 6. Mr. Joey Murrin (1998-2008)**  
Formerly Chairman and Director of An Bord Iascaigh Mhara and CEO of the Killybegs Fishermen's Organisation, Mr. Murrin is currently Chairman of the National Salmon Commission.
- 7. Mr. John O'Carroll (2001 – 2005)** Mr. O' Carroll is currently involved in Aquaculture production and marketing.
- 8. Ms Terry Fleming (2004-2009)**  
A Tax and Financial Consultant, Ms. Fleming has long experience as a corporate tax adviser with PricewaterhouseCoopers where she worked with a portfolio of major Irish and multinational clients, both publicly and privately owned. Educated at UCD and DCU, she is a member of the Institute of Taxation of Ireland.
- 9. Sean O'Donohue (2001 – 2006)**  
CEO of Killybegs Fishermen's Organisation, Mr O'Donoghue has a long established career in fisheries management working in the Department of Marine and BIM for twenty years prior to his present position. He has played a key role in a number of important fisheries issues such as fleet renewal and modernisation, TACs and quotas negotiations and the review of Common Fisheries Policy. He is chairman of the North West Pelagic Management Committee and represents the European Association of Producer Organisations on working group IV of the EU Commissions' Advisory Committee on Fisheries and Aquaculture.
- 10. Dairine MacFadden (2005 – 2010)**  
Dairine Mac Fadden is a Solicitor originally from Donegal but now based in Dublin. She graduated from UCD with a law degree [ B.C.L.] and returned there later to do a Diploma in European Law, followed by a masters degree in Law, by thesis on the Common Fisheries Policy. She has worked as in house Solicitor for RTÉ and also for TG4 and has represented commercial fishermen throughout Ireland while in general practice. She is currently working in the Law Society of Ireland.



## CHAIRMAN'S STATEMENT

2005 saw the curtain rising on a series of major developments for the Irish marine research community in 2006. Chief among these was the wide-ranging consultation process facilitated by the Marine Institute leading to a national marine research and innovation strategy for Ireland spanning the years 2007 to 2013. In advance of this strategy, a number of expert reports was commissioned, including a review of the previous 1998 strategy, a socio-economic analysis of the marine sector, a global market analysis, identification of third level marine research capacity and a study on the implications of climate change on the marine environment.

These reports, along with a series of draft scenario analyses, supported the work of several Foresight Panels, comprised of experts in various fields, whose job it was to look into the future, to make informed judgements on what goals "maritime Ireland" might set itself over the next six years and what manner of research and innovation effort would be needed to reach them. These results in turn were communicated at a stakeholders' meeting, of some 300 invited representatives of fishermen's organisations, aquaculture and marine food processing groups, marine tourism and leisure interests, the shipping industry, universities and institutes of technology, private companies and interested individuals, to "ground truth" the proposed research programme with the experience of people working in the everyday commercial world of the marine sector.

All these reports and discussions were then collated by the Institute, and in consultation with the Department of Communications, Marine and Natural Resources as well as our colleagues in other bodies within the State sector, and a Strategy will be published in 2006 as part of the overall government initiative on research and innovation.

I was proud to be part of this process and to witness the enormous effort that the Institute put into this far-reaching exercise, involving as it did the complex logistics of meetings, seminars and discussions across a wide range of interests. With agreement on the results, I have no doubt that Ireland will then be in possession of a very accurate chart with which to navigate its way into the future of marine research and innovation, unlocking the enormous economic and social benefits that our 220 million acre underwater territory has to offer in a sustainable way.

2005 also saw the final stages of building on the Institute's new headquarters and laboratory facility at Oranmore Co. Galway. This facility, designed by the award-winning architectural services of the OPW and built to the highest technical and environmental standards, will, I am sure, become the hub for the national marine research community and firmly establish Ireland as a gateway to the north-east Atlantic in terms of expertise and facilities.

At sea, the Institute continued to participate with our partners, the Geological Survey of Ireland, in the Irish National Seabed Survey, the most detailed examination ever undertaken of our offshore marine resources.

In addition to conducting research at a national level, the unique capabilities of the *R.V. Celtic Explorer* were also in demand by other countries for large-scale EU funded research projects. In February and March she undertook vital work on climate change with Hamburg University and became the first Irish research vessel ever to work within the Arctic Circle. It is a fine testament to the skill and foresight of those who designed and built this vessel that her services should be in such international demand.

National research vessel work included the annual groundfish survey, conducted by the Institute's Fisheries Science Services Team to assess the levels of important commercial fish stocks around the Irish coast. This information, along with data gathered by the team's scientists and Fisheries Assessment Technicians around the ports, was compiled into the annual Stock Book, a vital document used by the Minister and his team to negotiate quotas for the Irish fishing industry in Brussels in December.

As always, the Irish seafood sector relies on its reputation for quality and safety, and the Marine Institute, through its Marine Food and Environmental Services Team provided a wide range of monitoring support and advice across both the shellfish and finfish sectors. 2005 saw one of the largest outbreaks of the "red tide" species *Karenia mikimotoi* along the west coast, causing considerable mortalities to inshore fish and shellfish. This algal bloom was constantly monitored throughout its course by the Marine Institute, warnings given and all information, including satellite pictures, published on our website as the phenomenon ran its course.

Work has also continued in support of the aquaculture industry and wild salmon and sea trout fisheries from our newly-expanded facility at Newport, which celebrated its fiftieth anniversary this year. This event was celebrated with a series of public seminars in Co. Mayo covering such diverse and important subjects as marine renewable energy, fish stocks and aquaculture, the biology of Irish wildlife and the history of the Newport facility itself. The meetings were chaired by well-known environmentalists such as Duncan Stewart, Eamon de Buitlear and Dick Warner, with over 800 participants attending over the five evenings.

I am also pleased to see that the Institute continues in its mission "to address the national blind spot regarding our marine resources" through its outreach and education programmes in schools, exhibitions, the media and a specially commissioned DVD following a deepwater mission on the *RV Celtic Explorer* in February 2005. All of these activities, our publications and reports are available to view on the Institute website at ([www.marine.ie](http://www.marine.ie)) and I recommend anyone with an interest in the sea to pay this site a visit.

As always, the work of the Marine Institute was underpinned by a strong focus on our corporate governance. I am indebted to the Board Internal Audit Committee, who ensured that an effective system of internal financial control was maintained that supported the achievement of Marine Institute policies, aims and objectives during the year.

I would like to pay tribute to our outgoing Chairman, Dr. J.P. Crowley for his leadership and service to the Institute and look forward to working with the Board and staff to achieve our objectives and add value to the economy in the years ahead.



**Kevin Bonner**  
Chairman : Marine Institute



## CHIEF EXECUTIVE'S REPORT

2005 saw further important steps taken towards realising the Government's objective to establish a world-class marine research capability in Ireland. Throughout the year, work on the new headquarters and laboratory facility at Rinville, Oranmore, Co. Galway continued apace and occupation is now targeted for March 2006. This facility, with its state-of-the-art laboratories, data-processing, conference and administration offices, when working in concert with other marine research establishments in Galway, will form Ireland's "Atlantic Gateway" for a new era of marine exploration and development.

This drive towards the sustainable economic development of our marine resource will be guided by a Marine Knowledge, Research and Innovation Strategy for Ireland (2007 – 2013), compiled by the Marine Institute after a National Foresight Exercise and extensive consultation with industry and the Irish marine research community. This strategy, prepared on behalf of Government, and scheduled for publication in 2006, focuses on the major opportunities that lie ahead for Ireland in terms of international markets for marine food, global markets for marine environmental technologies, marine tourism, shipping and alternative energy sources, "bio-prospecting" for marine organic compounds with new pharmaceutical and chemical properties well as the challenges offered by climate change.

Another important task completed by the Marine Institute at the behest of Government was the completion of the follow-on strategy to the Irish National Seabed Survey. This INFORMAR (Integrated Mapping for the Sustainable Development of Ireland's Marine Resource) strategy was prepared in partnership with the Geological Survey of Ireland and received Government approval in November 2005, and will commence in 2006.

In addition to these major developments, I am pleased to report strong performance across all areas, as well as the following highlights:

The research vessels *RV Celtic Explorer* and *RV Celtic Voyager* continued to operate at peak productivity levels, both on national programmes and on contract for other marine research missions. The Celtic Explorer was the first Irish registered research vessel to venture into the

Arctic Circle, on an important research mission investigating ocean currents and the world's weather as part of a charter to scientists of the University of Hamburg. In February, the ship also undertook a groundbreaking multi-disciplinary study into the deepwater habitat of the orange roughly on a project lead by University College, Cork. Spectacular footage of deepwater corals, taken from a remotely operated vehicle will be available early in 2006 on the DVD "Explorer – A Deeper Understanding" produced by the Institute to chronicle the mission.

On the international stage, the Marine Institute has also been active through briefings and working groups at European level and with the support of the Irish Government we have been successful in securing a stronger horizontal accommodation for marine research and development in the draft EU Framework Programme 7. During 2005 we concluded an important bi-lateral Memorandum of Understanding (MoU) with our Norwegian counterparts, the Institute of Marine Research in Bergen. This MoU will provide a framework for an increased level of collaborations across a broad spectrum of marine R&D.

We have continued our efforts to strengthen the quality and impact of our core services together with a strong emphasis on the development of E-services delivery mechanisms and I would draw your attention to the details of these efforts in the accompanying reports from our various service teams.

I would like to emphasise my appreciation for the continued dedication and professionalism of the staff of the Marine Institute.



**Dr. Peter Heffernan**  
Chief Executive : Marine Institute





# CORPORATE SERVICES

## DIRECTOR'S STATEMENT

2005 was a year of continuing change within the Institute, with an additional 20 staff relocating to Galway and detailed planning and preparation for the move to the new corporate headquarters and laboratory facility at Rinville, Oranmore well underway. It was a year of development, focusing on quality service delivery, with Corporate Services fulfilling an essential role in ensuring the appropriate systems and expertise were in place to support those activities, while ensuring the highest levels of corporate governance. Key developments in 2005 included:

- Excellence Through People Gold Standard Accreditation – the Institute was awarded the first Gold Standard in the public sector for its human resource management programme. The primary purpose of the standard is to encourage the development of employees to their full potential so as to maximise their contribution to the organisation.
- A second version of our Service Level Agreement was agreed and implemented with DCMNR.
- Efficiencies continued to be achieved through the award of key contracts through a tender process resulting in significant savings that were reinvested in core programmes.
- The introduction of an electronic T&S System has been fully implemented, complete with reporting and a clear and concise handbook for users.
- An energetic Communications Campaign aimed at “addressing the national blind spot regarding our marine resources” through education and outreach was conducted during the year, including a teacher-training course, a specially commissioned DVD, educational supplements and appearances at several major exhibitions.
- The Marine Institute website ([www.marine.ie](http://www.marine.ie)) began a complete redesign.
- Our commitment to best practice corporate governance within the Institute remains stronger than ever, with nine separate internal audits in 2005 all showing that the financial and procedural systems in place are excellent and working well.
- We sought and were successfully granted tax relief was granted on childcare fees for staff in the new crèche in Oranmore.

- Building on the Environmental and Waste Management Policy introduced in 2004, additional policies and a waste review were introduced in 2005 with recommendations for 2006. We recognise the environmental responsibilities associated with our work and are committed to ensuring the principles and standards of good environmental and waste management practices are adhered to throughout the organisation.

*Chaphe*

**Ms. Caroline Hepburn**  
Director : Corporate Services



## HUMAN RESOURCES

Another successful recruitment campaign saw the appointment of 26 new staff with 32 internal appointments. This was complemented by the introduction of a Manager's Operational Handbook to assist managers with day-to-day issues, and the introduction of an electronic recording system for leave. The highlight of year however, was undoubtedly the award of the Excellence Through People Gold Standard by FÁS. The Institute was the first public body to achieve this prestigious award which is the national standard for human resource development.

The Performance Management Development System (PMDS) continued to form the cornerstone of development within the Institute as it evolves with the organisation, together with our commitments to efficiency, modernisation and world class customer service under the National Sustaining Progress Programme. With Health and Safety Statements in all locations, Health and Safety as well as general welfare continued to be a corporate priority, and there were no major accidents or incidents in 2005.

## ACCOUNTS

A full financial report is contained in the second part of this report

## FINANCE

The finance department continued to ensure that growth in the organisation was underpinned by strong corporate governance with a focus on budgetary planning and control. This was strengthened by the introduction of a e-payments system to vendors and comprehensive training on accounts analysis for managers throughout the Institute. Payroll, assistance with tendering and adherence to public procurement procedures as well as timely preparation of reports for the Department of Communication, Marine and Natural Resources, together with statutory reporting remain the central functions of the finance department.

## FACILITIES

2005 was an extremely busy year for the facilities department, with significant work on services for Oranmore being completed. Nine tenders were awarded, with several undergoing independent audits to ensure their compliance with public procurement procedures. Archiving policies and arrangements for Oranmore were also agreed and will be put in place in 2006.

## ACCESSIBILITY

An Accessibility Officer was appointed, and we have carried out an interim audit to ensure the Institute is fully compliant with the Disability Act 2005.



## COMMUNICATIONS

The communications team pursued an active campaign of public information and outreach during 2005. Exhibition stands were mounted at the RDS Young Scientist Exhibition, the Boat Show, the Irish Skipper “Inshore Ireland” trade exhibition, World Ocean Day at Tramore, Co. Waterford, the Galway Science and Technology Festival, and at the Innishowen Festival, Co. Donegal.

In February, a film crew from the television company Crossing the Line Films, went to sea on the *RV Celtic Explorer* to complete the 30-minute documentary “Explorer – Deeper Understanding” produced by the Communications Team. This is now available on DVD, co-sponsored by the *Discover Science and Engineering Programme of Forfás*.

The educational programme included a five-day teacher training course on “The Sea and the SESE” (the Social, Environmental, Scientific and Education curriculum for Primary Schools) conducted at Maree, Co. Galway in co-operation with Galway Education Centre. In addition, Marine Institute “Pirate Parties”, using cartoons to introduce young people to marine science, were held at the RDS (for the British Association for the Advancement of Science “Science Week”) and at Galway Atlantiquarium. A cartoon workbook, explaining the missions of the research vessels *RV Celtic Voyager* and *RV Celtic Explorer* was commissioned from cartoonist, environmentalist and author Don Conroy and a full colour 2005 Calendar on the Irish National Seabed Survey was produced with the Geological Survey of Ireland.

In November, an 8-page, full colour educational supplement entitled “Offshore” was sponsored by the Marine Institute in *The Irish Times*

The web page ([www.marine.ie](http://www.marine.ie)) entered a complete redesign, with new information architecture, while the Marine Institute library at Abbotstown was renovated in preparation for its migration in 2006 to new premises within the Rinville headquarters.

THE ROLE OF CORPORATE SERVICES IS TO PROVIDE A QUALITY SUPPORT SERVICE THAT PROMOTES, ADVISES, COMMUNICATES AND ASSISTS WORK ACROSS THE ORGANISATION IN A FRIENDLY AND EFFICIENT MANNER.





# IRISH MARITIME DEVELOPMENT OFFICE (IMDO)

## DIRECTOR'S STATEMENT

2005 was an extremely challenging year with mixed fortunes for the Irish shipping services industry. The sector was thrust headlong into the media spotlight that surrounded the Irish Ferries dispute. The IMDO provided support to the Government and worked closely with the parties involved in an effort to find an amicable solution. Nonetheless, the fallout from the disagreement will leave a number of challenges for the IMDO to confront in 2006. This will include preparing a long term seafarer development plan with stakeholders and government, while also not neglecting a potentially negative overall image of the sector that might have been generated during the dispute.

The dispute underlined the competitiveness challenges facing some segments of the passenger & freight business. They were not solely restricted to Irish Ferries. The strategically important central corridor routes between Ireland-UK and also the Ireland to France ro/ro routes witnessed capacity restructuring, bankruptcy, new operators, company takeovers and heightened competition from low cost airlines on the main passenger

routes. The IMDO outlined in detail these issues in a key report on state aid and competitive issues to the Government in July 2005.

However it was not all doom and gloom, the overall outlook for the sector remained buoyant with the underlying trend continuing to show positive signs of growth across the industry.

In its day-to-day role the IMDO continued to work closely with stakeholders to support a dynamic mix of both Irish and Foreign investments in the sector, particularly in the areas of commercial & physical operational maritime services. The high growth niche Irish maritime commercial sectors also continued to expand and add significant bottom line value to the maritime cluster in 2004.

The IMDO continued to see encouraging returns on its investment in the area of maritime education development with strong interest in training and placement of Irish seafarer cadets. While interest in our web based e-zine, and e-data services also recorded record viewing and visitor numbers.

The shipping sector contributed an estimated €1.45 billion to the economy in 2005 with an estimated €120 billion worth of goods and services being handled by the Irish ports and shipping services cluster. The ports and short sea shipping operators continued to enjoy strong unitized freight growth driven by sustained growth in the economy.

Finally in December the Minister reappointed the members of the Advisory Group to the IMDO, which will again be chaired by Mr. Padraic White for a further one-year period. I would like to thank the Chairman and the group for the continued support of the IMDO's work program.



**Mr. Glen Murphy**  
Director: Irish Maritime  
Development Office (IMDO)



The key developments in which the IMDO played a leading or supporting role during 2005 included:

- The IMDO worked closely with both Government departments and other industrial stakeholders in securing a new operator on the Ireland to France ferry service, which is a key trade artery for Irish livestock exports. The new operator was an Irish based company called Celtic Link based in Wexford.
- Singapore-based APL, the world's seventh largest container line, established a dedicated Irish operation located in Dublin. We worked closely with the company's European and UK operation in the lead up to this inward investment decision. The company also commenced physical operations from Dublin & Cork with its own services to the continent.
- By the end of 2006, six of the top ten leading container lines had dedicated, stand-alone Irish based operations.
- Submission of four separate sector policy reports to the Government during 2005, including the high level review of employment in the Irish ferry sectors in July.
- The IMDO published the second Annual Irish Maritime Transport Economist in April. We also published six shipping reviews of bilateral trade corridor reports.
- The IMDO took a front line role in the management of the public interest issues related to the Irish tonnage tax regime
- We supported the overseas industry cruise sector trade mission to the US in March that was led by Minister Pat the Cope Gallagher. The Cruise sector recorded an estimated 20% growth in passenger numbers in Ireland in 2005. The IMDO also supported the marketing of Irish industry maritime services Norshipping, Oslo in June and to nine other major maritime centres globally.

- Our Irish Seafarer Educational Assistance Scheme (ISEAS) cadet training programme enjoyed another strong year. The IMDO continues to work closely with the National Maritime College in Cork to undertake these programs. The ISEAS fund administered by the IMDO trained and supported 90 trainee cadets – (100% of cadets funded for sea time). While our support funding provided for existing 30 Irish merchant seafarers upskilling in the areas of Chief Mate / Masters / C.Eng Engineers / Second Engineers and Officer of the Watch training (Long term ratings)



- In September we launched ([www.maritimecareers.ie](http://www.maritimecareers.ie)), a new web portal dedicated to providing information to students about the various career opportunities in shipping industry. We also completed major development work on a new web portal, which will be targeted at primary schools in 2006 aiming to create awareness of the role of shipping and trade. We also supported on-shore management and specialized shipping education initiatives.
- More than 675,000 hits on IMDO web portal – representing a 12% increase on 2004 and the fourth consecutive annual increase of web traffic.

THE IRISH MARITIME DEVELOPMENT OFFICE HAS A STATUTORY MANDATE TO PROMOTE GROWTH IN THE IRISH SHIPPING SECTOR AND TO ATTRACT TO IRELAND ADDITIONAL MARINE RELATED OPERATIONS, ALONG WITH KEY PLAYERS IN INTERNATIONAL SHIPPING AND ANCILLARY SERVICES.





# MARINE ENVIRONMENT AND FOOD SAFETY SERVICES

## DIRECTOR'S STATEMENT

The Institute provided scientific services on food safety and marine environment to the Irish seafood sector and the State agencies such as the Department of Communications, Marine & Natural Resources (DCMNR) and the Food Safety Authority of Ireland (FSAI). The 50 scientists in the MEFS team carried out research and monitoring programmes in the areas of fish health and the marine environment. This scientific work forms the platform for the MI's advice to government agencies and the EU on seafood safety, marine environment, marine licensing and fish health.

A total of 25 test methods, covering the full range of monitoring in Shellfish Safety, Residues, Fish Health and Marine Environment Chemistry have now been independently accredited or submitted for ISO 17025 accreditation by the Irish National Accreditation Board (INAB)

The MEFS research programme continued in 2005. Key projects included; the Biological Oceanography

of Harmful Algal Blooms (BOHAB), the Isolation and purification of azaspiracids from naturally contaminated materials and evaluation of their toxicological effects (ASTOX). As well as new EU funded programmes on validation of alternative methods for marine biotoxins (BIOTOX) and the Reduction of risk in shellfish harvesting areas (REDRISK), two INTERREG projects got underway – Methods of Assessment of Trophic Status in the Irish Sea (MATSIS) and the Irish Sea Marine Aggregates Initiative (IMAGIN). Agreement was reached with the Environmental Protection Agency (EPA) on a project to define classification tools on plants, benthic organisms and fish to meet the needs of the Water Framework Directive

MEFS provided advice to the Department of Communications, Marine & Natural Resources, dealing with Foreshore Lease and Licence Applications, Dumping at Sea applications, aquaculture licences and monitoring. MEFS also began work on new areas of marine management

including Strategic Environmental Assessment and Marine Spatial Planning.

A highlight for 2005 was the input by the MEFS team into the consultation process and drafting of the Marine RTDI Strategy for Ireland, 2007 to 2013.

*Michael O'Connell*

**Mr. Micheal O'Cinnéide**  
Director: Marine Environment  
and Food Safety Services



## MARINE CHEMISTRY

The Marine Institute delivered its annual Residues monitoring report to DCMNR, the Department of Agriculture and the FSAI, as it has done each year since 1999. The team developed an innovative LC-MS based method for the detection of Malachite Green in finfish, as part of a SafeFood funded project. The Chemistry team worked with FSAI and the seafood industry on surveys to underpin the safety of products, including dioxins in blue whiting and farmed salmon. The Marine Institute worked with DCMNR to continue the monitoring programme for chemical contaminants in shellfish, to assist in meeting national obligations under the Shellfish Waters Directive, 79/923/EC. Oysters and mussels from 28 locations were tested for trace metals, PCBs and pesticides. Staff provided advice to expert committees such as the Marine Licence Vetting Committee, the Corrib Gas Environmental Monitoring group, Water Framework Directive groups, ICES and OSPAR.

## FISH HEALTH

The Fish Health Unit (FHU) supports the aquaculture industry and inland fisheries in maintaining Ireland's superior fish health status through the provision of both statutory services and diagnostic support.

In 2005, all marine and freshwater finfish sites were inspected and 1711 finfish were tested for the presence of listed diseases.

All *O. edulis* growing areas were tested in spring and autumn for the presence of the parasites *Bonamia ostrea* and *Marteilia refringens*. 1251 oysters were tested in the course of this screening programme. After the discovery of a pathogen (Bonamiosis) in wild native oyster beds in Lough Foyle, during in Spring 2005, an epidemiological investigation was carried out to try to determine the origin of the disease and to prevent further spread. A total of 574 oysters were tested as a result of this investigation. This work was carried out in co-operation with the Loughs Agency and DCMNR

Subclinical cases of Infectious Pancreatic Necrosis (IPN) virus in farmed salmon were identified in seven sites. The Marine Institute met with the company managers and their veterinary advisors to put a Risk Management plan in place.

The Strategic research program on Pancreas Disease was approved for funding under the NDP measure in autumn 2005, with partners in Queen's University Belfast and industry. The Marine Institute worked with colleagues in Norway and Scotland to build an innovative Tri-Nation approach to research and management of PD and related fish diseases.

The FHU provided regular advice to DCMNR on the use of veterinary medicines, finfish and shellfish movements within the country (46 applications) and finfish imports (45 cases) and shellfish imports from abroad (90 cases).

Advice was provided to the EU Commission, DG SANCO on the drafting of new EU Directive on fish and shellfish health. Staff attended six Working Group meetings under the auspices of the Standing Committee on the Food Chain and Animal Health.



## SEAFOOD SAFETY

The Marine Institute is the EU Designated Irish National Reference Laboratory for Marine Biotoxins and The National Reference Laboratory for monitoring bacteria and virus in bivalve molluscs. The team provides a weekly monitoring service, which includes monitoring of phytoplankton and biotoxins in shellfish flesh, for all shellfish production. The programme ensures Irish compliance with EU regulations on shellfish safety. The MI met its target of 90% of results published within 3 working days. Results of over 2,500 analyses were issued by Fax, e-mail and SMS text messages to regulators including the FSAI, Government Departments and the shellfish industry and published on the Institute's Web site at ([www.marine.ie/habsdatabase](http://www.marine.ie/habsdatabase)). The Shellfish Microbiology Unit has developed state-of-the-art methods for the detection of norviruses using real-time polymerase chain reaction techniques (PCR).

The sixth Irish Shellfish Safety Scientific Workshop was organised in association with the FSAI and BIM, and held in Galway on 1st December.





# FISHERIES SCIENCE SERVICES

## DIRECTOR'S STATEMENT

The waters around Ireland contain some of the most productive fishing grounds in Europe, with 2004 international landings of 1.4 million tonnes, worth €1.5 billion. Fisheries Science Services (FSS), working with its international partners from all over Europe, conducted a broad range of scientific projects to provide the scientific research, assessment and advice that help underpin the management of this valuable resource. FSS personnel chaired key scientific groups in the International Council for the Exploration of the Seas (ICES) dealing with stock assessment of whitefish and mackerel and the management and development of the advisory process at ICES. A key role for FSS in 2005 was to input into the new Marine R&I Strategy being developed for Government by the Marine Institute. A Foresight Planning exercise, with high-level fisheries scientists and managers from all over Europe was held to develop future scientific objectives for a new research and innovation programme

on the marine resource. These results fed into the wider R&I Marine Strategy. FSS continued its close working relationship with DCMNR and stakeholders by keeping them informed on new developments in scientific advice.



**Dr. Paul Connolly**  
Director : Fisheries Science Services



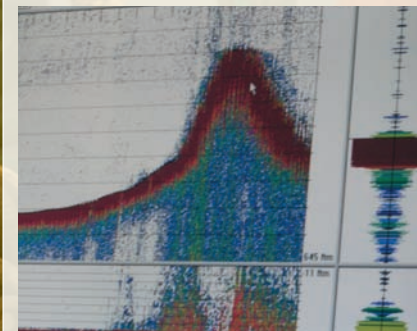
## ASSESS

Data collection is the raw material used to carry out stock assessment and provide advice for fisheries management. FSS secured €2.2 million in EU funding to enhance the collection of fisheries data. Research surveys are an important data source and in 2005, FSS staff spent 1,232 scientific days on missions conducted on the *RV Celtic Explorer*, *RV Celtic Voyager* and on commercial charters. These surveys included the annual Groundfish survey, which studied the fisheries resource on the shelf area around Ireland and the underwater TV surveys on the prawn grounds in the Irish Sea (the biggest prawn fishery in Europe), the Celtic Sea and Aran grounds. The international blue whiting acoustic survey was carried out on spawning aggregations in the Atlantic with Norway, Russia and Holland. Herring acoustic surveys were carried out in the Celtic Sea and off

the Donegal coast. A major deep-water survey was carried out in the Porcupine Bank area on the *RV Celtic Explorer* and the MFV Mark Amay. This survey programme deployed a deep-water submersible to film corals and deep-water fish species on the seabed at depths in excess of 1.2 km. These surveys while focused on fisheries are multidisciplinary in nature and involve a broad range of scientists (oceanographers, sea bed mappers) who collect a vast array of marine data.

## ADVISE

The annual Stock Book was published (hard copy, CD and on the web) in November and detailed the latest scientific advice on the fisheries resource and highlights key current issues in fisheries science (e.g. ecosystem advice, discarding). FSS supported the DCMNR in several key EU meetings on the formulation of fisheries management decisions for 2005 (e.g. blue whiting TACs). FSS scientists participated in over 17 international Working Groups at ICES, which focused on fish data collection, survey planning, stock assessment, integrated resource advice and stakeholder dialogue. FSS staff also participated at the ICES Advisory Committee on Fishery Management meetings (ACFM) where the scientific advice for 2005 was formulated and at several major EU meetings on various fisheries related topics (e.g. fish stock recovery plans).



## RESEARCH

Research is a key part of the FSS work programme and underpins assessment and advisory work. In 2005, a number of cutting edge scientific studies were undertaken:

A major NDP funded PhD study on the analysis of discarding by the Irish fleet was completed with University College Cork. Work continued with our third level partners on three NDP funded PhD studies; hake (University College Cork), blue whiting (Galway-Mayo Institute of Technology) and fish egg and larval ecology (National University of Ireland, Galway).

A major NDP funded project on the deep water orange roughy stocks off the west of Ireland was completed involving scientists from the Marine Institute, UCC, NUIG, BIM, Norway, New Zealand and South Africa. The unique insights provided by the scientific data collected in 2005 will frame a new integrated management plan for the exploitation of orange roughy and the protection of deep-water corals.

FSS were partners in two major EU projects that evaluated the current European Fisheries Advisory System (EASE) and examined various fisheries management tools (EFIMAS).

FSS joined 15 partners from Europe in a new EU funded project (MARIFISH) aimed at greater integration, efficiencies and effectiveness in fisheries science.

FSS worked with BIM and industry on the impact of closed areas off Greencastle on juvenile cod.

A major project on the deep water gillnet fishery off the west of Ireland was carried out in co-operation with BIM, Norway and UK. As a result of this work the EU banned the fishery for 2006.

THE PRIMARY ROLE OF FSS IS TO RESEARCH, ASSESS AND ADVISE ON SUSTAINABLE DEVELOPMENT OF LIVING MARINE RESOURCES IN THE WATERS AROUND IRELAND.

THE PRIMARY CUSTOMERS OF FSS ARE DCMNR, EU, INDUSTRY AND THIRD LEVE SECTORS. THE MAIN PRODUCT OF FSS IS SCIENTIFIC ADVICE ON STOCKS OF INTEREST TO IRELAND AND THIS IS ENCAPSULATED IN THE ANNUAL FSS 'STOCK BOOK' PRODUCED BY THE TEAM EACH DECEMBER.





# AQUACULTURE AND CATCHMENT MANAGEMENT SERVICES

## DIRECTOR'S STATEMENT

The Institute's Newport laboratory celebrated its Golden Jubilee in June 2005. Originally established as the Salmon Research Trust of Ireland in 1955, it later became the Salmon Research Agency in 1990 and joined the Marine Institute in 1999. To mark this important milestone in fisheries research in Ireland a public seminar series was run in Co. Mayo throughout the autumn. The events proved highly popular and over 800 participants attended the five evenings. The subjects covered ranged from the potential of ocean energy to the biology of whales and dolphins.

The past year also saw the completion of the EU funded CLIME project ([www.water.hut.fi/clime](http://www.water.hut.fi/clime)). This important initiative is part of CatchMod, the EU modelling cluster and comprises a consortium of climatologists, limnologists and

socio-economists from 16 institutes and ten countries, who have combined their expertise to study the direct and indirect effect of changes in the weather on the dynamics of freshwater lake systems. The aim of the project was to develop a Decision Support System that can be used to optimise the management of lakes in a warmer world. As in the case of the earlier REFLECT study the detailed data from the Burrishoole catchment proved invaluable to the project and it was these data which were used to support the programmes and predictive models.

During the past year, in partnership with colleagues from the Central Fisheries Board, scientists from ACMS compiled the first ever review of salmon stock status in individual rivers. This comprehensive database covered all 148 Irish salmon rivers. The

database was made available to the Scientific Committee of the National Salmon Commission and laid the foundation for management advice, which was, for the first time, based on the requirements of individual river stocks.

*Kenneth F. Whelan*

**Dr. Ken Whelan**  
Director: Aquaculture and Catchment Management Services



## SALMON

The major issue confronting Atlantic salmon stocks is poor marine survival and for the past four years Arnaud Peyronnet, a PhD student working at ACMS has, in cooperation with scientists working with NOAA in the US, carried out a comprehensive review of factors affecting marine survival of Irish salmon stocks. His study *Effects of climate and ocean conditions on the marine survival of Irish salmon (Salmo salar, L.)* is now complete and has shown that marine growth is a major determinant in shaping survival, particularly between the late summer and early winter of the first year at sea. The study highlights the potential of indices of circuli number as proxies for growth. General Additive Models (GAM's) were fitted to time series of wild and hatchery Irish Atlantic salmon survival. The models explained approximately 80% of the observed variation in survival and provided a powerful forecasting tool as well as an insight into the mechanisms involved. The study showed that a positive phase of the North Atlantic Oscillation (NAO) and increasing Sea Surface

Temperatures (SSTs) have resulted in a decrease in the abundance of a key zooplankton species, *Calanus finmarchicus*, leading to a decrease in the rates of salmon survival, probably via effects on the fish growth.

## EEL

The European eel stock is outside safe biological limits and throughout Europe eel fisheries are no longer sustainable. Central to a recovery plan is the establishment of a National Eel Management Plan containing stock targets and methodologies for the improved gathering of fisheries statistics. This will facilitate the measurement of spawner escapement and target compliance. Over the past year ACMS has supported national and international management initiatives through the provision of scientific advice at national and international fora.

## AQUAREG

The second call for proposals under the AQUAREG Programme, jointly managed by ACMS and partners in Spain and Norway, was successfully completed and a total of twelve projects have been funded to the value of €2.7 million (See Appendix 1). Ireland is involved in ten of these to the value of almost €1 million. The Institute has taken the lead in two projects one on coastal zone management and one on exchanges between the regions (RegEx). The Institute is also involved as a partner in a third project entitled Seawomen. This is a networking project linking women's groups involved in coastal and maritime communities in the three regions.

## AQUACULTURE

Heavy settlement of sea lice larvae was again reported on many salmon farms this spring and the impact of sea lice both on farmed and wild salmonids is of major concern. ACMS in partnership with colleagues from UCD (lead partner) and DCU, have successfully completed the proof of concept phase of a sea lice vaccine which could have a significant positive impact worldwide. Research programmes to assess levels of lice infestation on wild coastal salmon and lice induced mortalities on outward migrating wild salmon smolts, are nearing completion. A suite of releases in 2006 at various locations around the country will complete the programme. In May 05 ACMS collaborated with the North Western Regional Fisheries Board to take samples of prematurely returning sea trout smolts and adults from the Newport and Burrishoole estuaries in Clew Bay. The fish sampled were particularly badly affected by sea lice – up to 265 lice on a single sea trout smolt. Resultant marine survival back to Burrishoole has been the lowest since records commenced in the early 70's and only 3 finnock and 14 adult sea trout were recorded moving upstream through the traps. A Sea Lice Monitoring and Control Working Group was set up by the Minister for the Marine in the autumn of '05 and it is hoped that integrated control of sea lice on salmon farms will show a significant improvement during the spring of 2006.

Marine Institute support for the cod culture programme in south Connemara has continued. This is a collaborative programme with NUIG, Údúras na Gaeltachta & Trosc Teo. Three cohorts of young cod have been put to sea. Juveniles as small as 8 grams have been successfully transferred to sea and on-grown with minimal losses. The largest fish are now over 1kg average and should be ready for harvest in 2006.





# OCEAN SCIENCE SERVICES

## DIRECTOR'S STATEMENT

In 2005 the Ocean Science Services Group continued to broaden its input to, and support of, national Marine RTDI. The Group contributed to a wide range of activities at national and international level and also contributed to the national Marine RTDI Strategy Process. Considerable effort has been made to develop links both at national and international level in this regard and to evolve OSS into a group that provides comprehensive operational services to research clients and to utilise these practical services to support the Irish RTDI community.

Highlights for the year included:

- Successful delivery of schedule for *Celtic Explorer* from January to December (306 days)
- Successful delivery of the *Celtic Voyager* Programme (220 days)
- Successful commercial programmes on both vessels to secure external contribution to operational budget.

- A multidisciplinary survey on the *Celtic Explorer* to assess acoustics as a method of producing the first ever abundance estimates for Orange Roughy stocks in Western and Northern rises of the Porcupine area.
- The charter of the *Celtic Explorer* to Hamburg University brought the vessel to the Arctic circle in February/March to undertake meteorological and oceanographic investigations. This demonstrated the capability of the vessel to undertake large scale international projects on charter.
- Meetings were held with representatives of tenderers to develop the transition plan for the initiation of the Technical & Operational Support Services contract (contract to be signed early 2006).
- A detailed work plan for a major half-life refit programme for the *Celtic Voyager* for 2006 was produced.
- OSS has been working with members of the UN's Food and Agriculture Organisation to organise a

survey in the West Indies as part of the Lesser Antilles Pelagic Ecosystem Project (LAPE) which the *Celtic Explorer* may carry out in 2006.

- A Memorandum of Understanding between the Marine Institute and the Institute of Marine Research in Bergen was signed by Marine Minister Mr. Pat "the Cope" Gallagher T.D. and State Secretary of Norway Ms Janne Johnsen, opening the doors for unique collaborations with other world-leading researchers at international level.
- Excellent aerial coverage achieved on Irish National Seabed Survey Activities, including a special order survey of Cork Harbour
- Implementation and successful completion of the first Marine Institute cross-service pilot project.
- Managing and implementing a range of value-added and ancillary projects in the Irish National Seabed Survey (INSS) including managing survey data acquisition for the

IMAGIN and HABMAP Interreg IIIA projects and participation on the deepwater coral investigation

- Successful mapping on other Marine Institute programmes including Orange Roughy, Groundfish and *Nephrops* surveys
- 3-vessel MESH Consortium work with the BGS and DARD NI
- Development, and Government ratification, of the successor to the Irish National Seabed Survey – the Integrated Mapping for the sustainable development of Ireland's Marine Resource Project (INFOMAR), including identification of priority bays and areas.
- The inclusion of high precision oceanographic instruments on the National Weather Data buoy network to measure ocean temperature and salinity
- The initiation of a project to upgrade the acquisition systems on board the national weather buoys allowing 2 way communications and troubleshooting with the buoys remotely.
- A fully developed 3 dimensional physical circulation model of the Irish ocean area.
- Wave model development to facilitate ocean energy device deployments
- Phase one of the Irish Tide Gauge Network is now complete with 5 gauges reporting

real-time data to the web (Galway, Killybegs, Castletown, Rosslare and Dublin)

- Deployment of instrumentation to support research and monitoring across the Institute and other agencies (eg. BOHAB, Cod trials in Bertraghboy)
- Quality assurance and archiving of oceanographic profile data from the research vessels
- Completion of the ICES oceanographic sections between the Irish coast and Rockall Bank
- Contract signed for 100% EU funded study on European Seas Observatory Implementation Model (ESONIM) – development of a plan for a deep sea observatory Network modeled on the Porcupine Abyssal plain site.
- Significant liaison and participation in strategic international and European groups was a significant feature of the programme in 2005 (eg. ICES, ERVO, ISOM, GMES, ESONIM, ESONET, EuroGOOS, IBI-ROOS and NOOS)



Mr. Micheal Gillooly  
Director : Ocean Science Services

## OCEANOGRAPHIC SERVICES

Comprehensive oceanographic services, include the management of the national equipment pool and management and operations of Irish Marine Data Buoy Network were provided in 2005 to underpin many national programmes. Oceanographic Services also provide significant input to the provision of a data service to the marine community and are active in ocean modelling, remote sensing and coastal oceanography, including the development of the Irish national Tide gauge network.

## RESEARCH VESSEL OPERATIONS

This section continued to coordinate and manage the operation of the Marine Institute's two research vessels, the *Celtic Voyager* and the *Celtic Explorer* in order to achieve maximum scientific impact and the greatest value for money. The section provided support services to the users of the vessels, including instrumentation and engineering support services and extremely flexible operations. The full programme of all research vessel operations undertaken in 2005 is given in Appendix 6 of this report and includes a wide range of operations, impacting across the many scientific and monitoring programmes operated by the Institute.

## SEABED SURVEY

This specialist section within the group continued to conduct core survey activity in the Irish National Seabed Survey (INSS) 2002-2005, in conjunction with the Geological Survey of Ireland. This included the development and implementation of value-added products, services and ancillary projects from the survey in order to maximise the potential of survey activity.





# STRATEGIC PLANNING AND DEVELOPMENT SERVICES

## DIRECTOR'S STATEMENT

2005 was a challenging and busy year for the SPDS team in advancing its developmental agenda. Consultation and partnership were fundamental to achieving our objectives and highlights included:

The preparation of a **Marine Knowledge, Research and Innovation Strategy for Ireland 2007-2013**, including a National Foresight Exercise involving 119 experts, a stakeholder consultation meeting attended by over 150 people, 3 meetings of the Marine Third Level Liaison Group and 17 meetings with development agencies and industry representative groups. Three foresight reports were published, 2 new databases developed and the outputs from the foresight exercise were published and feedback sought via the MI website.

The NDP Section managed a hugely successful call for competitive R&D research proposals from the third level sector and the industry. New R&D projects totalling Grant-Aid: €3,729,473 were funded.

The International Programme Section was actively engaged in working with our European partners to influence the definition of the scope and content

of the EU 7th Framework Programme (2007 – 2013). Services also included active brokering and facilitation of new projects under the 6th Framework and INTERREG programmes.

Three major initiatives in the Marine Technology area took shape through 2005. A Ocean Energy Strategy was agreed with sister agency Sustainable Energy Ireland, an international benchmarking and scoping project was funded in Marine Biodiscovery and a suite of new R&D projects to develop environmental monitoring projects was funded in conjunction with the EPA.

In the tourism area a new partnership was initiated with Failte Ireland, Tourism Ireland, the Department of Arts Sports and Tourism and the Local Authorities to identify an integrated development strategy for marine tourism and leisure in line with the recommendations the Tourism Policy Review Group. A discussion document - *Towards a Marine Tourism & Leisure Strategy 2007-2013* was prepared and widely circulated in advance of its finalisation in 2006.

The Information Services and Development Team had an extremely busy year preparing for the IT 'fit out' in the Institutes new headquarters in Oranmore. In addition the Data Warehouse Programme of projects was advanced resulting in the incorporation of oceanographic and biological scientific data sets into the Marine Data Repository. The team were again successful in securing funds from the Information Society to lead a new project in conjunction with the EPA, GSI and UCC to develop a Marine Data Exchange. The teams innovative work in the area of GIS was recognised with a "Special Achievement in GIS" award at the International ESRI User Conference held in San Diego.

*Yvonne Shields*

**Ms. Yvonne Shields**  
Director: Strategic Planning  
and Development Services



## FORESIGHT AND PLANNING

A National Foresight Exercise was undertaken, designed to feed into the preparation of the new National Marine Research Strategy for Ireland in response to the Government's objective to develop Ireland's knowledge economy. This will be published as *Sea Change: A Marine Knowledge, Research and Innovation Strategy for Ireland 2007-2013* in 2006.

## TOURISM AND LEISURE

The Institute's wide-ranging exercise in preparation of the strategy *Towards a Marine Tourism and Leisure Strategy 2007-2013* began in 2005. This strategy, which will address national policy, market, product development and investment issues, is being undertaken through extensive stakeholder consultation and was presented to the Tourism Policy Review Group, Failte Ireland and a workshop of senior representatives of government and industry in 2005. A high-level working group of representatives of government departments, tourism agencies and Local Authorities will guide the strategy to completion in 2006.

The Institute also hosted the international conference – *Regeneration: An Opportunity for the Development of Marine Leisure*, to discuss the regeneration of fishing harbours and waterfronts as marketable tourist attractions.

## INDUSTRY LIAISON SERVICES

A new micro innovation award was introduced on a pilot basis to offer small-scale flexible funding. A directory of Irish-based marine companies offering goods and services to the sector in Ireland will go on-line in 2006.

## MARINE RESEARCH MEASURE – NDP

Increasing interest in marine research meant that applications to the 2005 call from industry and the third level sector exceeded available grant support by 400%. Of the 24 applications to the strategic research fund, 12 were approved, with grant-aid totalling €2,844,757 and supporting 31 researchers. In addition, 3 Post-doctoral Fellowships and 4 PhD Studentships were awarded totalling €666,488, as well as funding under the Networking Technology Transfer Programme for 24 research workers from industry and the higher education sector totalling €29,440.

Four awards under the Applied Industry Research Programme were made to marine SMEs for innovative research projects on marine food, instrumentation and renewable energies.

## INFORMATION & DEVELOPMENT

In 2005, IS&D continued to provide solutions in a wide range of areas including:

- A Marine Data Repository to integrate a wide range of oceanographic and biological data sets.
- A Marine Data Exchange Service, led by the Marine Institute in partnership with the Environmental Protection Agency, the Geological Survey of Ireland and the Coastal and Marine Resources Centre at UCC.
- The "Follow the Fleet" educational system for the Irish Maritime Development Office.
- Data support systems for the National Salmon Micro-tagging programme.
- A new internal Intranet system for the Institute.
- A catalogue system for the Marine Institute library.

## MARINE TECHNOLOGY

A joint strategy for the development of the ocean energy sector in Ireland to 2020 was agreed with Sustainable Energy Ireland and endorsed by the Department of Communications, Marine and Natural Resources, enabling Ireland to develop as a key player in this emerging technology. Within this strategy, Institute funding was also agreed for the Hydraulics and Maritime Research Centre at UCC to develop practical models of ocean energy devices and a Wave Energy Test Site was leased by the Institute in Galway Bay for practical testing.

A biodiversity proof-of-concept project was initiated with partners at UCC, NUI Galway, UCD, TCD and DCU to explore the potential of a long-term, research-intensive programme to develop national capability in such areas as drug development and novel bio-materials.

A suite of advanced technology projects on water sensor systems were funded under a partnership agreement with the Environmental Protection Agency involving research groups at UCC, the Tyndall Institute, the National Centre for Sensor Research (DCU), the Microelectronic Applications Centre and Industry.



## INTERNATIONAL PROGRAMMES

The Institute was involved, through the Irish Council for Science, Technology and Innovation (ICSTI), in the promotion of marine science in the 7th EU Framework Programme (2007-2013) as well as briefing EU representatives from the Directorate of Fisheries and Maritime Affairs, senior EU representatives and MEPs.

The Marine Institute up-dated its Directory/Database of Irish participation in competitive marine RTD projects (see Appendix 1.) and continued to work with the European Science Foundation Marine Board ([www.esf.org/marineboard](http://www.esf.org/marineboard)) and the EU MarinERA project. The Institute also hosted international workshops on *Indicators for Integrated Coastal Zone Management (April)* and *Irish/UK interests in Irish Sea/Celtic Sea Marine Science (September)*.



**European Marine Scientific Research: Perspectives 2007-2013.**  
European Parliament, 17th October 2005.

Left to right: Mr Joe Borg, EU Commissioner, DG Fisheries & Maritime Affairs, Prof. Ed Hill, Director, National Oceanographic Centre, Southampton (UK), Mr. Jean-Yves Perrot, President and CEO, IFREMER (France), Dr Erwin Suess, MD, KDM (Germany), Ms Godelieve Quisthoudt-Rowohl, MEP (Germany), Dr JP Minster, Director General Science, CNRS (France), Mr Peter Harry Carstenensen, Minister President, Schleswig-Holstein (Germany), Prof Peter Herwig, Director, Leibniz Institute of Marine Sciences, (Germany) Dr Peter Heffernan, CEO, Marine Institute (Ireland).





# GENERAL ADMINISTRATION

## LIAISON

The programme of the Marine Institute covers a wide range of activities, that require close liaison and co-operation with many individuals and organisations. These include the Department of Communications, Marine and Natural Resources, Department of Finance and other government departments and state agencies, private enterprise and the higher education sector. The Institute acknowledges the continued support and co-operation of all concerned.

## HEALTH AND SAFETY

In accordance with the Health and Safety and Welfare Act (1989), the Marine Institute has up-dated all Health and Safety Statements. The Institute continues to implement appropriate measures to protect the safety and health of all employees and visitors to its premises.

## ETHICS AND PUBLIC OFFICE ACT

All persons holding a designated position within the Marine Institute provide a statement of interests to the Public Office Commission in accordance with sections 18 and 20 of the Ethics in Public Office Act, 1995.

## EMPLOYMENT EQUALITY

The Marine Institute is committed to a policy of equal opportunity and adopts a proactive approach to equality. The Institute operates a number of schemes that provide staff with options in relation to meeting their career and personal needs, such as job sharing, study leave and educational programmes.

## CODE OF PRACTICE (REPORTING)

The Marine Institute adheres to the statutory Codes of Practice for Governance of State Bodies as laid down by the Department of Finance. The Institute can confirm that Directors and employees have adopted and are trained on:

- Formal code of conduct on conflict of interest and customer charter
- Properly constituted Audit Committees
- Procurement procedures
- Sensitive Issues

# APPENDICES

## APPENDIX 1 // IRISH PARTICIPATION IN EU RTD PROJECTS UNDER:

### A) THE FP6 / INTERREG-III PROGRAMME

European Union Research (FP) and Regional Development (INTERREG) Programmes play a major role in facilitating and supporting Irish participation in pan European cooperative marine research and regional development projects and initiatives.

Under the FP6 Programme (2002-2006) an additional 17 co-operative projects (grant-aid €3.3 million) were added to the 15 projects (grant-aid €4 million) reported in 2004. This brings the total FP6 grant-aid since 2002 to €7.3 million.

Full details are included in the Marine Institute publication *Directory of Irish Marine Successes in the 6th Framework Programme* (November 2005).

Under the INTERREG-III suite of Programmes (2000-2006) a further 6 Projects (grant-aid: €2.3 million) were added, bringing number of marine projects to 36 and the total grant-aid since 2000 to over €10 million.

A Directory of Irish participation in INTERREG-III is in preparation and will be published in 2006.

### EU FP6 PROJECTS

**MAP: Secondary Marine Aerosol Production from Natural Sources**  
National University of Ireland, Galway

**PROTECT: Marine Protected Areas as a tool for ecosystem conservation and fisheries management**  
National University of Ireland, Galway

**AQUAFIRST: Combined genetic and functional genomic approaches for stress and disease resistance marker assisted selection in fish and shellfish**  
National University of Ireland, Galway

**PANDA: Permanent network to strengthen expertise on infectious diseases of aquaculture species**  
National University of Ireland, Galway

**AMPERA: Accidental Marine Pollution**  
Marine Institute

**SEADATANET**  
Marine Institute

**ENCORA: European Network on Coastal Research**  
University College Cork

**LOGBASED**  
Nautical Enterprise Centre Ltd. Cork

**MARNIS: Maritime Navigation and Information Services**  
Nautical Enterprise Centre Ltd. Cork

**AQUALABS: Advanced Laboratory Training Courses in Aquaculture for Early-Stage Researchers**  
Aqua TT Dublin

**AqASEM Aquaculture Platform**  
Aqua TT Dublin

**CRAB: Collective Research on Aquaculture Biofouling**  
Aqua TT UETP Ltd. Dublin

**BLUESEED: Technology development for a reliable supply of high-quality seed in blue mussel farming**  
Aqua TT UETP Ltd, Dublin.

**SPIINES 2: Sea urchin Production in Integrated systems, their Nutrition and roe Enhancement**  
Dunmanus Seafoods Ltd. Bantry

**FISHTANKRECIRC**  
Killybegs Electrical Refrigeration Services Ltd; Pollution Control Systems Ltd.

**KEYZONES**  
Southeast Shellfish Co-op; La Tene Maps; Clew Bay Marine Forum

**SWIRL-JET STUDY**  
Imar Surveys Ltd. Bantry

### INTERREG-III

**IMAGIN: The Irish Sea Marine Aggregates Initiative**  
University College Cork

**Living Coasts - Living Seas**  
Fingal Co Co

**MEDACS: Marine Environment Damage to Atlantic Coast Structures**  
Trinity College Dublin

**SALAR: Atlantic River Salmon**  
South West Regional Authority, Ballincollig

**ISLA**  
Bere Islands Project Group

**ESIN IIEP: European Small Islands' Network Inter-Ireland Exchange Project**  
Inter-Island Exchange Project, Inis Oírr

### B) THE FP6 / AQUAREG PROGRAMME

**AQUA BY-PRODUCTS**  
IFA Aquaculture

**CZM: Coastal Zone Management**  
Marine Institute

**CRAB TRANSPORT**  
BIM

**Lobster Restocking**  
MRI Carna

**OPEL: Culture of Atlantic Cod**  
MRI Carna

**AQUAGAIR: Prolonging the Shelf-life of Fresh Mussels**  
Letterkenny IT

**BIOPURALG: Seaweeds as Filters for Wastewater**  
Irish Seaweed Centre MRI Oystercreek Ltd



# APPENDICES

## APPENDIX 2 // NDP MARINE RTDI MEASURE 2005

RegEx: Regional Exchange of Information in Aquaculture and Inshore Fishing Marine Institute	The Marine Institute, (on behalf of Department of Communications, Marine& Natural Resources [DCMNR] the Department of Enterprise, Trade & Employment [DETE] is the Implementing Agency for the NDP – Marine RTDI Measure [MRTDI] 2000-2006. Grant-aid is allocated on a competitive basis following public calls for proposals. Full details of grant-aid allocations to-date can be seen at (www.marine.ie/marinertdi).
Carrasea: Evaluation of Carrageen Seaweed Production Irish Seaweed Centre MRI	
SEAWO-MAN: Developing Co-operation and Information Exchange Marine Institute.	The main objectives of the MRDTI Measure are:  To support project based RTDI identified in a range of targeted areas.  To enhance and consolidate the performance of the marine sector in Ireland through support for R&D and technology transfer activities.  To provide the RTDI capacity to enable Ireland to fully utilise her marine resource potential in a sustainable manner
	By December 2004 over €44 million (86%) of the Marine RTDI budget of €52 million was expended and/or allocated to a variety of infrastructure and competitive MRTDI projects. This included the provision of the National Research Vessel - Celtic Explorer €29,558,090 and seven awards for laboratory infrastructure upgrades totalling €268,541.
	By December, the RTDI measure had committed almost €14 million through 173 awards. Of this, €3,758,972 was committed to awards in 2005 with advance payments of €460,935 made. New projects in 2005 included:

NETWORKING/TECHNOLOGY TRANSFER PROGRAMME 2005	
A total of 24 successful applicants were awarded Grant-aid totalling	€29,440
7 x Sponsorship for Workshops & Conferences	€19,500
15 x Mobility Awards	€9,000
2 x Other Networking/Technology	€939.50
APPLIED INDUSTRY PROGRAMME 2005	
Total Grant-aid awarded to 4 new projects was €240,000 and advance payments of €96,000 representing 40% of total grant-aid were paid out in 2005.	
IND/05/01: Development & Assessment of the First Hatchery-Stage Artificial Diets for Sea Urchins [Hatch Feeds] Grantee: Dunmanus Seafood's Ltd Total Grant-Aid €60,000	
IND/05/03: Control Systems for ROVs Grantee: Marine Informatics Total Grant-aid: €60,000	
IND/05/05: PTOBUOY - Power Take-off Systems for the OE Buoy Wave Energy Converter Grantee: Ocean Energy Ltd Total Grant-aid: €60,000	
IND/05/06: Development of cost effective gravity based foundation system to support wind energy converters in deeper waters. Grantee: Sure Engineering (Europe) Ltd Total Grant-aid: €60,000	

# APPENDICES

## APPENDIX 2 // NDP MARINE RTDI MEASURE 2005

### MICRO INNOVATION 2005

Micro Innovation grants were developed under the Applied Industry Programme with a maximum Grant-Aid of €7,000 per project. Total Grant-aid awarded to 2 new projects was €14,000. No advance payment were necessary	ST/05/03: Extension of the Marine Institute's marine Data Repository to include biological Data and development of supporting tools Grantee: MI/UCC Total Grant-aid: €255,503
MIA/05/01: Research Study on Self Adjusting Mooring System Grantee: Prolines Marina Ltd Total Grant-Aid €7,000	ST/05/04: Marine Biodiscovery – Manager and Proof of Concept Grantee: To be finalised Total Grant-aid: €374,663
MIA/05/04: Development of advanced flow calculations and visualisation features in the next generation of the 3D numerical well test software, Panmesh Grantee: Kepler Engineering Software Ltd Total Grant-Aid €7,000	

### STRATEGIC PROGRAMME 2005

Total Grant-aid awarded to 11 new projects (7 under the Open Call, 4 under the Defined Call) was €2,645,959 and advance payments of €595,471 representing approximately 22.5% of total grant-aid were paid out in 2005.	ST/05/08: Sea & Swell Spectra Grantee: UCC Total Grant-aid: €131,250
	ST/05/09: Cold-water Carbonate Mound Development & Continental Margin Dynamics: a contribution to IODP307 Grantee: UCC Total Grant-aid: €199,845
	ST/05/10: Novel vaccines for the control of sea lice on salmonids Grantee: UCD Total Grant-aid: €186,775
	ST/05/11: Finding aquatic viral epitopes for production of peptide based vaccines Grantee: NUI,G Total Grant-aid: €186,713
	ST/05/12: The foraging ecology of the Harbour Seal (Phoca vitulina vitulina) in Ireland Grantee: UCC Total Grant-aid: €206,299
ST/05/02: The use of Genetic Stock Identification (GSI) techniques to determine the river of origin of Irish Atlantic salmon Grantee: UCC Total Grant-aid: €388,446	

ST/05/17: Simulation & forecasting system for ecosystem dynamics in Irish waters Grantee: NUIG Total Grant-aid: €151,729
ST/05/25: An investigation into the ability of pacific oysters, scallops & abalone to act as carriers of the protozoan Bonamia ostreae Grantee: UCC Total Grant-aid: €160,102

### POST DOCTORAL FELLOWSHIP

Total Grant-aid awarded to 3 new projects was €353,988 and advance payments of €141,595 representing 40% of total grant-aid were paid out in 2005.
PDOC/05/001: Advanced Technologies for Aquaculture Grantee: UL Total Grant-aid: €119,928
PDOC/05/002: Instrumentation interface, communication & data management architecture issues for marine sensor systems, including sea-floor observatories Grantee: DCU Total Grant-aid: €124,719
PDOC/05/006: Integrated modelling using real-time data assimilation and high-end computing resources Grantee: NUI,G Total Grant-aid: €109,341

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## APPENDIX 2 // NDP MARINE RTDI MEASURE 2005

### POST GRADUATE SCHOLARSHIP

Total Grant-aid awarded to 4 new projects was €312,400 and advance payments of €124,960 representing 40% of total grant-aid were paid out in 2005.

**PhD/05/001: Stock Assessment in Large Riverine Catchments**  
Grantee: NUIG  
Total Grant-aid: €81,000

**PhD/05/002: Assessing EcoSystem and Ocean Climate Changes in the sea area west of Ireland using the Continuous Plankton Recorder and Synchronous**  
Grantee: NUIG  
Total Grant-aid: €81,400

**PhD/05/004: Hydro Acoustics: use of multiple source Hydro Acoustics data as a tool in ocean management**  
Grantee: UL  
Total Grant-aid: €70,000

**PhD/05/005: Benthic mapping of the biologically Sensitive as a tool in ocean management**  
Grantee: GMIT  
Total Grant-aid: €80,000

### DESK STUDY PROGRAMME

Total Grant-aid awarded to 3 new was €163,596 and advance payments of €65,438 representing approximately 40% of total grant-aid were paid out in 2005.

**DK/05/001: Platforms for Marine Monitoring**  
Grantee: UL  
Total Grant-aid: €48,475

**DK/05/003: The use of Data Mining techniques for the quality control of scientific data**  
Grantee: UCC  
Total Grant-aid: €60,121

**DK/05/004: Fast Ro-Pax Ferries**  
Grantee: Nautical Enterprise Centre Ltd  
Total Grant-aid: €55,000

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## APPENDIX 3 // MARINE INSTITUTE PUBLICATIONS

### SPECIAL REPORTS

**Report of the COST-ESF Sponsored Expert Workshop on Sustainability Indicators for the Coastal Zones of Europe (Howth: 25th – 26th April 2005)**  
*Cummins, O'Mahony, Gault and O'Sullivan (2005). Marine Institute. (2004)* ISBN: 1-902895-24-X

**Status of Irish Aquaculture 2004 – A Report Prepared by the Marine Institute, Bord Iascaigh Mhara and Taighde Mara Teo.**  
*Parsons, A., O'Carroll, T., O'Cinnéide, M. and Norman, M. (2005)* ISBN : 1-902895-28-2

**The Stock Book: Annual Review of fish stocks in 2005 with management advise for 2006.**  
ISBN : 1-902895-27-4

### MARINE TOURISM & LEISURE SPECIAL REPORTS

**A National Survey of Water-based Leisure Activities in Ireland by the Marine Institute – based on a report prepared by Professor James Williams and Ms Bernadette Ryan, Economic and Social Research Institute. ISBN: 1-902895-25-8.**

**Angling – Domestic Market 2003 Factsheet**  
**Coastal & Inland Boating – Domestic Market 2003 Factsheet**  
**Watersports – Domestic Market 2003 Factsheet**  
**Seaside/Resort Trips – Domestic Market 2003 Factsheet**

### MARINE FORESIGHT SERIES ISSN: 1649-590X

**No. 1: Marine Industries Global Market Analysis.**  
126pp. *Douglas-Westwood Limited. (March 2005).*

**No.2: Climate Change: Implications for Ireland's Marine Environment & Resources.**  
38pp. *Boelens, R., Minchin, D., and O'Sullivan, G. (April 2005).*

**No.3: Ocean Energy: Analysis of the Potential Economic Benefits of Developing Ocean Energy in Ireland. Summary Report.**  
8pp. *(Dec 2005).*

### INTERNATIONAL CO-OPERATION PUBLICATIONS

**Sponsored Expert Workshop on Sustainability Indicators for the Coastal Zones of Europe (Howth: 25th-26th April 2005).**  
Marine Institute. 8pp. *Cummins, V., O'Mahony, C., Gault, J. and O'Sullivan, G. (2005)*

**A Directory of Irish Marine Successes in the EU 6th Framework Programme (FP6).**  
Marine Institute. 38pp. *Mercer, M. and O'Sullivan, G. (2005)*

### MARINE TECHNOLOGY PUBLICATIONS

**Analysis of the Potential Economic benefits of Ocean Energy.**  
Marine Institute (2005). *(This report was carried out for the Marine Institute by Peter Bacon and Associates and ESB International).*

**Accessible Wave Energy Resource Atlas – Ireland 2005.**  
Marine Institute / Sustainable Energy Ireland (2005) *(This report was carried out for the Marine Institute by ESB International.*

**OCEAN ENERGY: Development & Evaluation Protocol.**  
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### IRISH FISHERIES BULLETIN ISSN: 1649 5055

**No. 22 2005**  
**National Survey of Sealice (Lepeophtheirus salmonis Kroyer and Caligus elongates Nordmann) on Fish Farms in Ireland.**  
*O'Donohoe, P. Kennedy, S. Kane, F. Naughton, O. Tierney, D. Jackson, D. (2004)*

**No. 23 2005**  
**The status of the inshore component of the northern brown crab Cancer pagurus fishery, assessed from a time series of LPUE constructed from historical sources.**  
*Meredith, D. and Fahy, E. (2005)*

### IRISH FISHERIES INVESTIGATIONS ISSN: 0578 - 7467

**No. 14 2005**  
**The Dundalk Cockle Cerastoderma edule fishery in 2003-2004**  
*Fahy, F., Carroll, J., and Murran, S. (2005).*

**No. 15 2005**  
**Fishery-associated changes in the whelk Buccinum undatum stock in the southwest Irish Sea, 1995-2003.**  
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## APPENDIX 3 // MARINE INSTITUTE PUBLICATIONS

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No. 21 2005  
Karenia mikimotoi: An Exceptional Dinoflagellate Bloom In Western Irish Waters, Summer 2005.  
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O'Mahoney, E., Bradley, D.G., Kennedy, C.R. & Holland, C.V. (2004). Parasitology 129; 341-347.

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## APPENDIX 5 // CENSUS DATA FROM THE BURRISHOOLE SYSTEM, 2005

### UPSTREAM CENSUS DATA FOR THE BURRISHOOLE SYSTEM, 2005 (PROVISIONAL)

SPECIES	SALMON LEAP UPSTREAM 2005	MILL RACE UPSTREAM 2005	TOTALS UPSTREAM 2005	TOTALS UPSTREAM 2004	TOTALS UPSTREAM 2003
Wild Grilse	455	75	530	580	544
Wild Spring Salmon	8	1	9	28	18
Reared Grilse	700	137	837	962	1156
Wild Sea Trout	9	5	14	18	19
Wild Finnock	2	1	3	72	59
Wild Brown Trout	55	10	65	70	40

### DOWNSTREAM CENSUS DATA FOR THE BURRISHOOLE SYSTEM, 2005

SPECIES	SALMON LEAP DOWNSTREAM 2005	MILL RACE DOWNSTREAM 2005	TOTALS DOWNSTREAM 2005	TOTALS DOWNSTREAM 2004	TOTALS DOWNSTREAM 2003
Wild Salmon Smolt	6823	444	7267	9316	7248
Wild Sea Trout Smolt	757	24	781	723	787
Sliver Eel	2196	394	2590	2905	3919



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APPENDIX 6 // RESEARCH VESSEL PROGRAMME 2005

CELTIC VOYAGER

INSTITUTE	SCIENTIST / SERVICE AREA	DATES	LOCATION	DESCRIPTION
Marine Institute	MEFS	12/01/05 - 27/01/05	Irish Sea	Annual Nutrients Survey
Galway Mayo Institute of Technology	Dr. Dave McGrath	11/02/05 - 14/02/05	West	Student Training
National University of Ireland Galway	Dr. Rachel Cave	13/04/05 - 15/04/05	West	Student Training
Marine Institute	OSS	17/04/05 - 19/04/05	North West	M4 Databuoy Maintenance
Marine Institute	OSS	23/04/05 - 25/04/05	East	M2 Databuoy Maintenance
Trinity College Dublin	Dr. Jim Wilson	26/04/05 - 27/04/05	East	Student Training
Dublin Corporation	Mr. Tim O'Higgins	28/04/05 - 28/04/05	East	Dublin Bay Project
Marine Institute	OSS	09/05/05 - 22/05/05	West	Seabed Survey
Marine Institute	OSS	23/05/05 - 26/05/05	North West	M1 Databuoy Maintenance
Marine Institute	FSS	27/05/05 - 03/06/05	West	UWTV Survey
Marine Institute	MEFS	07/06/05 - 13/06/05	Irish Sea	Nutrients Survey
University College Cork	Dr. Andrew Wheeler	14/06/05 - 27/06/05	Irish Sea	Habitat Mapping
Radiological Protection Institute of Ireland	Dr. Alison Dowdall	28/06/05 - 28/06/05	Irish Sea	Radiation Monitoring
Joint Nature Conservation Committee	Kerry Howell	09/07/05 - 13/08/05	Atlantic	JNCC Survey
National Museums and Galleries of Wales	Dr. Andrew Mackie	25/07/05 - 08/08/05	Irish Sea	Habitat Mapping
Marine Institute	OSS	18/08/05 - 20/08/05	South	Databuoy Maintenance
Marine Institute	OSS	01/05/05 - 06/05/05	South	Marathon Oil
CMRC	Mr. Gerry Sutton	01/09/05 - 14/09/05	Atlantic	IMAGIN Survey
Marine Institute	FSS	21/08/05 - 30/08/05	Irish Sea	UWTV Survey
Marine Institute	OSS	17/09/05 - 30/09/05	North West	MESH Project
Trinity College Dublin	Dr. Jim Wilson	01/11/05 - 02/11/05	East	Student Training
Marine Institute	OSS	18/02/05 - 23/02/05	Atlantic	Cross Services Survey
Marine Institute	FSS	27/02/05 - 10/03/05	Atlantic	Groundfish Survey
Marine Institute	OSS	03/10/05 - 08/10/05	Atlantic	Databuoy Maintenance
CMRC	Mr. Gerry Sutton	29/06/05 - 05/07/05	Atlantic	IMAGIN Survey
Marine Institute	OSS	11/10/05 - 17/10/05	Atlantic	Seabed Survey
Marine Institute	FSS	03/11/05 - 12/11/05	Irish Sea	UWTV Survey
Dublin Corporation	Mr. Tim O'Higgins	31/10/05 - 31/10/05	East	Dublin Bay Project

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APPENDIX 6 // RESEARCH VESSEL PROGRAMME 2004

CELTIC EXPLORER

INSTITUTE	SCIENTIST / SERVICE AREA	DATES	LOCATION	DESCRIPTION
Marine Institute	FSS	06/01/05 -26/01/05	North West	North West Herring Acoustic Survey
Marine Institute	FSS	05/02/05 - 20/02/05	Atlantic	Orange Roughy Survey
University Of Hamburg	Dr. Gerd Mueller	22/02/05 - 23/03/05	Atlantic	Norwegian Sea Survey
Marine Institute	FSS	25/03/05 - 14/04/05	Atlantic	Blue Whiting Survey
National University of Ireland Galway	Dr. Anthony Grehan	10/06/05 - 25/06/05	Atlantic	NUIG. ROV Survey
Marine Institute	OSS	16/03/05 - 24/05/05	Atlantic	Seabed Survey
Marine Institute	FSS	26/09/05 - 30/09/05	Irish Sea	Irish Groundfish Survey
Marine Institute	FSS	02/10/05 - 22/10/05	Atlantic	Herring Acoustic Survey
Marine Institute	OSS	29/06/05 - 12/09/05	Atlantic	Seabed Survey
Marine Institute	FSS	24/10/05 - 29/11/05	Atlantic	Irish Groundfish Survey
University of Bremen	Dr. Tim Freudenthal	10/12/05 - 16/12/05	South East	University of Bremen Survey



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APPENDIX 7 // FOREIGN MARINE SCIENTIFIC RESEARCH (FMSR) ACTIVITIES IN IRISH WATERS IN 2005

COUNTRY	VESSEL NAME	DATES	LOCATION	RESEARCH ACTIVITY
France	Thalassa	19/10/2005 - 03/12/2005	Celtic Sea, Bay of Biscay	Fishery
Germany	Walther Herwig III	18/03/2005 - 03/04/2005	All west coasts	Pelagic fishing using trawl net
Germany	walther herwig III	16/09/2005 - 06/10/2005	S and E, and Celtic Sea	Pollution Monitoring
Liberia	Joides Resolution	26/04/2005 - 16/05/2005	Off SW coast	Ocean drilling program - core one of a series of giant mounds on seabed surface SW of Ireland
Netherlands	Pelagia	23/03/2005 - 15/04/2005	Atlantic	Sediment survey
Netherlands	Pelagia	22/06/2005 - 13/07/2005	Rockall Trough	Biological research on the cold-water coral community. This research forms part of the international HERMES project funded by the European Community
Netherlands	Pelagia	13/07/2005 - 21/07/2005	Rockall Trough	
Netherlands	Pelagia	08/09/2005 - 06/10/2005	N Atlantic SE of Greenland to W of Ireland	
Netherlands	Pelagia	20/05/2005 - 20/06/2005	Rockall Trough	Marine Biology
Netherlands	Tridens	07/03/2005 - 26/03/2005	West Irish Sea	Blue Whiting Survey
Norway	G.O. SARS	11/03/2005 - 15/04/2005	West Irish Sea	Blue Whiting Survey
Russia	Fridtjof Nansen	15/02/2005 - 05/05/2005	All west coasts	Blue whiting and Mackerel acoustic and trawl survey
Spain	Vizconde de Eza	03/09/2005 - 03/10/2005	West coast	Fisheries
UK	Benaiah IV	28/02/2005 - 15/04/2005	Irish Sea	Investigate spatial distribution and collect biological information on Irish Sea gadoid
UK	Charles Darwin	16/07/2005 - 06/08/2005	Celtic and Irish Seas	Investigation of salinity, temp, chlorophyll, phytoplankton species
UK	Charles Darwin	11/08/2005 - 08/09/2005	NE Atlantic	Shallow seismic, gravity, magnetic & bathymetry
UK	Charles Darwin	12/09/2005 - 02/10/2005	Irish Sea and Celtic Seas	Water column and bottom sediment sampling
UK	Charles Darwin	06/10/2005 - 01/11/2005	NE Atlantic	Hydrographic Survey
UK	Corystes	16/09/2005 - 05/10/2005	Celtic and Irish Seas	Fishery

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APPENDIX 7 // FOREIGN MARINE SCIENTIFIC RESEARCH (FMSR) ACTIVITIES IN IRISH WATERS IN 2005

COUNTRY	VESSEL NAME	DATES	LOCATION	RESEARCH ACTIVITY
UK	Discovery	12/10/2005 - 24/11/2005	Atlantic	Oceanography
UK	Endeavour	10/11/2005 - 11/12/2005	Irish and Celtic Seas and	Groundfish survey off N coast
UK	Endeavour	09/02/2005 - 23/02/2005	Celtic and Irish Seas	Sampling of Chlorophyll a, suspended solids, salinity and temperature
UK	Endeavour	03/03/2005 - 22/03/2005	Celtic Sea	Groundfish survey suing a Portuguese High Headline Bottom Trawl and 4m Beam Trawl
UK	Our Josie Grace	10/02/2005 - 31/03/2005	Irish Sea	Investigate spatial distribution and collect biological information on Irish Sea gadoids
UK	Prince Madog	10/04/2005 - 18/04/2005	Irish Sea	Oceanography
UK	Prince Madog	18/06/2005 - 21/06/2005	Irish Sea	Bivalve survey Irish Sea
UK	Prince Madog	27/06/2005 - 30/06/2005	Celtic and Irish Seas	Geology
UK	Prince Madog	23/07/2005 - 05/08/2005	Celtic and Irish Seas	Oceanography
UK	Prince Madog	19/09/2005 - 28/09/2005	Irish Sea	Nutrients Survey
UK	Prince Madog	29/08/2005 - 14/09/2005	Irish Sea	Turbulence; Salinity temperature and structure
UK	Scotia	16/03/2005 - 26/03/2005	NE Atlantic	Fishery
UK	Scotia	16/11/2005 - 07/12/2005	NE Atlantic	Fishery



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APPENDIX 8 // CONFERENCES AND WORKSHOP SPONSORSHIP IN 2005

Indicators for Integrated Coastal Zone Management (April)	Regeneration: An Opportunity for the Development of Marine Leisure	British Association for the Advancement of Science (BAAS), Festival of Science 2005 “Fishing for Answers: How can we use the seas sustainably?” Trinity College, Dublin. Sept 2005.
Irish/UK interests in Irish Sea/Celtic Sea Marine Science (September).	International ESF-COST Expert Workshop on “Sustainability Indicators for the Coastal Zones of Europe”. April 2005.	
MONTH	EVENT	DATES
January	ESAT Young Scientist Exhibition	January 3th-15th
	15th Irish Environmental Researchers Colloquium, ENVIRON 2005, Sligo Institute of Technology	January 28th - 30th
February	Irish Skipper Expo, Galway	February 11th-12th
	IMF Boat Show, Royal Dublin Society	February 23th-27th
March	Marine Foresight Panels	March 22nd
April	Indicators for Integrated Coastal Zone Management	April 7th-8th
	International ESF-COST Expert Workshop on “Sustainability Indicators for the Coastal Zones of Europe”.	April 21st
May	MESH INTERREG 111B (Marine Environment Seabed Habitat Mapping) Conference, Galway	May 24th – 27th
June	World Ocean Festival, Tramore, Co. Waterford	June 9th – 12th
	Galway Bay Cruiser Championship 2005	June 29th – July 3rd
	Festival of the Sea, McGlinchey Summer School, Inishowen, Donegal	June 23rd – 26th
	International Marine Biotechnology Conference, St Johns, Newfoundland	June 7th – 12th
July	A Marine Knowledge, Research & Innovation Strategy 2007-2013: Stakeholders Meeting	July 12th
August	WKNCT (Intercalibration working on new and classical techniques for the determination of numerical abundance & biovolume of HAB-Species) Workshop, Fiskebackskil, Sweden,	August 22nd – 26th
September	Irish/UK interests in Irish Sea/Celtic Sea Marine Science	
	Regeneration: An Opportunity for the Development of Marine Leisure, Killiney Castle, Dublin	September 30th – October 1st
	British Association for the Advancement of Science (BAAS), Festival of Science 2005 “Fishing for Answers: How can we use the seas sustainably?” Trinity College, Dublin.	
	Local Authority Workshop, Clarion Hotel, IFSC, Dublin	September 22nd
December	6th Irish Shellfish Safety Scientific Workshop, Galway	December 1st – 2nd

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APPENDIX 9 // THE “NEWPORT 50” SEMINAR SERIES

2005 marked the Golden Jubilee of the Marine Institute, Newport, established in 1955 as the Salmon Research Trust of Ireland, later becoming the Salmon Research Agency in 1991, and joining the Marine Institute in 1999. To mark this significant milestone in fisheries research in Ireland a Golden Jubilee lecture series was inaugurated in September and continued throughout the autumn and early winter. The talks were arranged to cover several of the major towns in Mayo but included the Buckland Lecture, which took place in the RDS Dublin in early November. The content of the lecture series was designed to offer a platform to a variety of marine interest groups and to cover a wide range of content from marine birds and mammals to highly topical issues such as harvesting energy from the sea and the management of marine fish stocks. The series was exceptionally well attended at all venues and it is estimated that a total of well over 700 individuals attended one or more of the lectures. Indeed the series was so absorbing that it did indeed attract a hard core of camp followers who attended all of the lectures. Tom McSweeney broadcast live his Seascapes programme from the final evening of the series, held in the new Hotel Newport. The success of the series was due to the excellent quality of speakers, the range of varied topics and also the chairing of the sessions by our expert group of chairmen. Indeed at the Castlebar event Eamon DeBuitlear decided that the audience needed a break from the science of the evening and delighted the audience of over 200 with an impromptu concert of well known traditional Irish tunes on his harmonica. This event typified the atmosphere at the all of the talks: cordial and above all enthusiastic with a palpable desire for facts and information on our shared marine resource.

**Dr. Ken Whelan**  
*Director: Aquaculture and Catchment Management Services*

Organising Team	Dr Ken Whelan, Dr Russell Poole, Kathleen Sweeney & Annette Mullen
<b>Energy from Nature Ballina, 29th September, 2005</b>	
Inauguration	Barry McSweeney
Introduction	Dr Peter Heffernan CEO, Marine Institute
Chair	Duncan Stewart
Speakers	
Eoin Sweeney	Marine Institute
Dr Tom Shaw	Shawwater Ltd, UK
Torben Andersen.	Airtricity
Attendance:	80
<b>Marine Birds &amp; Mammals Castlebar, 13th October, 2005</b> (In collaboration with BirdWatch Ireland – Mayo Branch)	
Introduction	Dr Ken Whelan Marine Institute
Introduction	Derek McLoughlin Birdwatch Mayo
Chair	Eamon de Buitlear
Speakers	
Dr Simon Berrow	Shannon Dolphin & Wildlife Foundation
Dr Stephen Newton	Senior Conservation Officer Birdwatch Ireland
Attendance:	210
<b>Fish, Ships &amp; Cages Westport, 3rd November 2005</b>	
Introduction	Dr Ken Whelan Marine Institute
Chair	Dick Warner
Speakers	
Dr Paul Connolly	Marine Institute
Dr Niall O'Maoileidigh	Marine Institute
Mr James Ryan	Consultant
Attendance:	120

<b>Conservation of Salmon Habitat RDS, 15th November 2005</b> (In conjunction with the Buckland Foundation, UK.)	
Introduction	Dr Peter Heffernan CEO, Marine Institute
Introduction	Dick Shelton Buckland Foundation
Speaker	
Prof. John Armstrong	Faskally Freshwater Laboratory, Scotland.
Attendance:	60
<b>Burrishoole – Past, Present &amp; Future Newport, 17th Nov.</b>	
Introduction	Mr Kevin Bonner Chairman, Marine Institute
	Minister Pat the Cope
Gallagher	
Dr Peter Heffernan Chair	CEO, Marine Institute Dr Ken Whelan Marine Institute
Speakers	
Kevin Barton	Landscape & Geophysical Services
Michael Gibbons	Institute of Archaeologists of Ireland
Shane Rooney	Geophysics, NUIG
Dr Russell Poole	Marine Institute
Dr Ken Whelan	Marine Institute
Attendance:	240

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## APPENDIX 10 // NATIONAL AND INTERNATIONAL SCIENTIFIC WORKING GROUPS AND ADVISORY BODIES CHAIRED BY MARINE INSTITUTE STAFF

### INTERNATIONAL BODIES

INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEAS (ICES)		
Consultative Committee (Conc)	Niall O'Maoileidigh	Chairman
Working Group on Environmental Interactions of Mariculture	Francis O'Beirn	Chairman
Working group on the Assessment of Mackerel, Horse mackerel, Sardine and Anchovy (WGMHSA)	Ciaran Kelly	Chairman
Review Group on Baltic Fisheries Assesment Working Group (RGBFAS)	Ciaran Kelly	Chairman
Diadromous Fish Committee (DFC)	Niall O'Maoileidigh	Chairman
Review Group on the Assessment of Southern Shelf Demersal Stocks (RGSSDS)	Colm Lordan	Chairman
Working Group on Elasmobranch Fisheries (WGEF)	Maurice Clarke	Chairman
Management Committee on the Advisroy process (MCAP)	Paul Connolly	Chairman
Working Group on the Assessment of Northern Shelf Demersal Stocks (WGNSDS)	Rick Officer	Chairman

THE MARINE INSTITUTE ALSO PROVIDES EXPERT STAFF AS MEMBERS OF THE FOLLOWING COMMITTEES AND WORKING GROUPS:		
◦ Advisory Committee for Fisheries Management (ACFM)	◦ ICES Working Group on Integrated Coastal Zone (WGICZM)	
◦ Mariculture Committee	◦ Review group on Baltic Fisheries Assessment (RGBFAS)	
◦ Marine Chemistry Working Group (MCWG)	◦ Resource management Committee (RMC)	
◦ Marine Shellfish Culture Working Group	◦ Study Group on Management of Integrated Data	
◦ Working Group on Marine Sediments	◦ Iberian-Biscay-Irish Regional Ocean Observing System Technical Task Team.	
◦ North Atlantic Salmon Working Group (WGNAS)	◦ Working Group on Application of Genetics to Fisheries Management and Mariculture	
◦ Study Group on By-catch of Salmon in Pelagic Fisheries (SGBYSAL)	◦ Study Group on Management Strategies (SGMAS)	
◦ Advisory Committee on Ecosystems	◦ Study group on Risk Assessment and Management Advice (SGRAMA)	
◦ ICES/EIFAC Working Group on Eel	◦ Methods Working Group (WGMG)	
◦ Advisory Committee on the Marine Environment (ACME)	◦ Working Group on Harmful Algal Bloom Dynamics	
◦ Working group on Oceanic Hydrography		

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## APPENDIX 10 // NATIONAL AND INTERNATIONAL SCIENTIFIC WORKING GROUPS AND ADVISORY BODIES CHAIRED BY MARINE INSTITUTE STAFF

### EUROGOOS

EUROGOOS		
<b>Board of Directors</b>	Glenn Nolan	Board Member
The Marine Institute also provides expert staff as members of:		
◦ Steering group for the North West shelf Ocean Observing System (NOOS)		
◦ Steering group for the Iberia Biscay Ireland regional OOS (IBI-ROOS).		
JOINT FAO/IOC/WHO AD HOC EXPERT CONSULTATION ON MARINE BIOTOXINS		
Analytical Working Party	Philipp Hess	Chairman
NORTH ATLANTIC SALMON CONSERVATION ORGANISATION (NASCO)		
	Ken Whelan	President

The Marine Institute also provides expert staff as part of the EU Delegation to NASCO and the Scientific Advisory Group (SAG)

OSLO-PARIS CONVENTION (OSPAR)		
ASMO (Assessment Committee & Monitoring)	Evin McGovern	Head of Delegation
SIME Working Group (WG on Substances in the Marine Environment)	Evin McGovern	Head of Delegation

The Marine Institute also provides expert staff as members of the:		
◦ Biodiversity Committee		
◦ Working Group on Environmental Impact of Human Activities (EIHA)		
◦ Offshore Industry Committee		

### EUROPEAN SCIENTIFIC AND WORKING GROUPS

The Marine Institute provides expert staff as members of the following groups:

EUROPEAN COMMITTEE FOR STANDARDISATION (CEN), TECHNICAL COMMITTEE 275, WORKING GROUP 5)		
	Philipp Hess	Representing National Standards Authority of Ireland
EU MARINE STRATEGY (EMMA) WORKING GROUP (EUROPEAN MARINE MONITORING AND ASSESSMENT)		
	Evin McGovern	Head of Delegation
AMPERA (ACCIDENTAL MARINE POLLUTION) EU CO-ORDINATION ACTION PROJECT		
	Evin McGovern	Executive Board Member
EU-MAURITANIA JOINT SCIENTIFIC COMMITTEE (JSC)		
	Ciaran Kelly	Member
EU FISH HEALTH COUNCIL WORKING GROUP.		
National Representative Representative	Fiona Geoghegan	National
EUROPEAN RESEARCH VESSEL OPERATORS (ERVO)		
Vice-Chairman	John Breslin	Vice-Chairman
EU FP6 GLOBAL CHANGE AND ECOSYSTEMS PROGRAMME COMMITTEE		
	Geoffrey O'Sullivan	National Delegate



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## APPENDIX 10 // NATIONAL AND INTERNATIONAL SCIENTIFIC WORKING GROUPS AND ADVISORY BODIES CHAIRED BY MARINE INSTITUTE STAFF

### EU MARINERA PROJECT CO-ORDINATION OF NATIONAL AND REGIONAL MARINE RESEARCH ACTIVITIES IN EUROPE (2004 - 2008)

Technical Committee	Geoffrey O'Sullivan	Joint Chair (2004 – 2006)
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### INTERREG-IIIa (IRELAND / WALES) PROGRAMME

Programme Committee	Geoffrey O'Sullivan	Delegate for the Marine & Coastal Environment (Priority 2 / Measure 1)
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### MARINE BOARD - EUROPEAN SCIENCE FOUNDATION

Marine Board	Geoffrey O'Sullivan	Vice Chairman
Working Group on Marine Science Communications	John Joyce	Chairman

- The Marine Institute also provides expert members of staff to serve on:
- Working Group on Remote Sensing'
  - Working Group on the Impact of Climate Change on European Seas and Oceans
  - Working Group on European Ocean Fleets

### COMMUNITY REFERENCE LABORATORY NETWORK (CRL) / NRL

Marine Biotoxins	Terry McMahon Philipp Hess	Representatives of the Marine Institute in its role as EU National Reference Laboratory on Marine Biotoxins
Bacteria and Viruses in Shellfish	Bill Dore Sinead Keavney	Representatives of the Marine Institute in its role as EU National Reference Laboratory on monitoring Bacteria and Viruses in Shellfish

## NATIONAL BODIES

### FOOD SAFETY AUTHORITY OF IRELAND

- The Marine Institute provides expert staff to serve on:
- Scientific Committee
  - FAC Subcommittee
  - Biotoxin Working Group
  - Molluscan Shellfish Safety Committee
  - FSPB Research Network on Natural Toxins and Anti-Nutritional Compounds

### DEPARTMENT OF COMMUNICATIONS, MARINE AND NATURAL RESOURCES

Marine Licence Vetting Committee	Terry McMahon	Chairman
Irish Offshore Strategic Environmental Assessment Steering Group	Micheal O' Cinneide Thomas Furey Eugene Nixon	Chairman Member Member

- The Marine Institute also provides expert members of staff to serve on:
- Aquaculture Licensing Advisory Committee
  - Technical Advisory Group to the Irish Quality Salmon Scheme
  - Sea Lice working Group
  - Cod Advisory Group
  - ICZM Steering Committee
  - AquaReg Steering Committee
  - International Council for Offshore Aquaculture Development Steering Committee

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## APPENDIX 10 // NATIONAL AND INTERNATIONAL SCIENTIFIC WORKING GROUPS AND ADVISORY BODIES CHAIRED BY MARINE INSTITUTE STAFF

### NATIONAL SALMON COMMISSION

Standing Scientific Sub-Committee	Niall O'Maoileidigh	Chairman
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### SCIENTIFIC JOURNALS

- Marine Institute staff also serve as reviewers on the following scientific journals:
- Aquaculture - Proceedings of the 7th International Workshop on Smoltification, Tono, Japan, 2005.
  - Aquatic Living Resources
  - Canadian Journal of Fish Biology
  - Conservation Biology
  - Ecology
  - Fisheries Research
  - ICES Journal of Marine Science
  - Journal of Chromatography
  - Journal of Fish Biology
  - Journal of Theoretical Biology
  - Journal of Shellfish Research
  - Journal of Sea Research
  - Journal of Experimental Marine Biology and Ecology
  - Oecologia
  - Toxicon

- Marine Institute expert staff also serve on the following national and international groups:
- International Atlantic Salmon Research Board
  - Scientific and Economic Committee on Fisheries (STECF) of the European Union
  - Loughs Agency (Cross Border)

GLOSSARY OF ABBREVIATIONS

ACFM	Advisory Committee on Fisheries Management	ESF	European Science Foundation
ACMS	Aquaculture and Catchment Management Services (of the Marine Institute)	ESF-MB	European Science Foundation - Marine Board
ALO	Aquaculture Liaison Officer	EU	European Union
ARC	Aquaculture Research Committee	FATS	Fisheries Assessment Technicians
ASP	Amnesic Shellfish Poisoning	FHU	Fish Health Unit
AZP	Azaspracid Poisoning	FP6	Sixth Framework Programme
BIM	Bord Iascaigh Mhara (the Irish Sea Fisheries Board)	FSAI	Food Safety Authority of Ireland
CEFAS	Centre for Environment, Fisheries and Aquaculture	FSS	Fisheries Science Services
CEH	Centre for Ecology and Hydrology	GIS	Geographic Information System
CEO	Chief Executive Officer	GMIT	Galway Mayo Institute of Technology
CFP	Common Fisheries Policy	GSI	Geological Survey of Ireland
CMA	Connecticut Maritime Association	HABS	Harmful Algal Blooms Service
CTD	Conductivity, Temperature and Depth	HMRC	Hydraulics and Maritime Research Centre
DAF	Department of Agriculture and Forestry	ICES	International Council for the Exploration of the Seas
DARDNI	Department of Agriculture and Rural Development, Northern Ireland	ICT	Information Communications Technology
DAS	Data Acquisition System	IFA	Irish Farmers Association
DCMNR	Department of Communications, Marine and Natural Resources	IFREMER	Institute français de recherché pour l'exploration de la mer (French Research Institute for the Exploration of the Sea)
DG SANCO	European Commission Health and Consumer Protection Directorate	IFSHAC	Irish Fish and Shellfish Advisory Committee
DIT	Dublin Institute of Technology	IHO	International Health Organisation
DSP	Diarrhetic Shellfish Poisoning	ILAB	Irish Accreditation of Laboratories
DTX-2	Dinophysis Toxin - 2	ISA	Infectious Salmon Anaemia
EIFAC	European Inland Fisheries Advisory Commission	ISAV	Infectious Salmon Anaemia Virus
EPA	Environmental Protection Agency	ISEAS	Irish Seafarers Educational Assistance Scheme
ERA	European Research Area	ISPG	Irish Seafood Producers Group
		IT	Information Technology
		IMDO	Irish Maritime Development Office

GLOSSARY OF ABBREVIATIONS

INTERREG	EU Inter-Regional Co-operation Programme	R&D	Research and Development
LC/MS	Liquid Chromatography – Mass Spectrometry	RASATA	Rapid Azapriacid Shellfish Toxin Analysis
MARLAB	Fisheries Research Services Marine Laboratory	RPII	Radiological Protection Institute of Ireland
MEFS	Marine Environment and Food Safety Services (of the Marine Institute)	RTD	Research, Technology and Development
MHC	Major Histocompatibility Complex	RTDI	Research, Technology, Development and Innovation
MI	Marine Institute	RV	Research Vessel
MOU	Memorandum of Understanding	SCOFCAH	Standing Committee on the Food Chain and Animal Health
MSR	Marine Scientific Research	SDMS	Ships Data Management System
MTDS	Marine Technical and Development Services	SMEs	Small to Medium Sized Enterprises
NAB	National Accreditation Board	SPDS	Strategic Planning and Development Services
NDP	National Development Programme	STECF	Scientific, Technical and Economic Committee on Fisheries
NEAFC	North East Atlantic Fisheries Commission	STI	Science Technology and Innovation
NOAA	National Oceanic and Atmospheric Administration	TAC	Total Allowable Catch
NSC	National Salmon Commission	TCD	Trinity College Dublin
NUIC	National University of Ireland, Cork	UCC	University College Cork
NUIG	National University of Ireland, Galway	UETP	University Enterprise Training Partnership
NZ	New Zealand	UK	United Kingdom
OIE	Office International des Epizooties (World Organisation for Animal Health)	UN	United Nations
OSPAR	Oslo and Paris Convention (1992)	UNCLOS	United Nations Convention on the Law of the Sea
OSS	Ocean Science Services (of the Marine Institute)	UNICPOLOS	United Nations Informal Consultative Process on the Oceans and the Law of the Sea
OST	Office of Science and Technology	US	United States
PAD	Petroleum Affairs Division	USA	United States of America
PMDS	Performance Management Development Systems		
PSP	Paralytic Shellfish Poisoning		
QUASIMEME	Quality Assurance of Information for Marine Environmental Monitoring in Europe		



# REPORT OF THE COMPTROLLER AND AUDITOR GENERAL

FOR PRESENTATION TO THE HOUSES OF THE OIREACHTAS

I have audited the financial statements of the Marine Institute for the year ended 31 December 2005 under the Marine Institute Act, 1991.

The financial statements, which have been prepared under the accounting policies set out therein, comprise the Accounting Policies, the Income and Expenditure Account, the Balance Sheet, the Cash Flow Statement, the Statement of Total Recognised Gains and Losses and the related notes.

## RESPECTIVE RESPONSIBILITIES OF THE THE INSTITUTE AND THE COMPTROLLER AND AUDITOR GENERAL

The Institute is responsible for preparing the financial statements in accordance with the Marine Institute Act, 1991, and for ensuring the regularity of transactions. The Institute prepares the financial statements in accordance with Generally Accepted Accounting Practice in Ireland. The accounting responsibilities of the Members of the Board are set out in the Statement of Responsibilities of the Board.

My responsibility is to audit the financial statements in accordance with the relevant legal and regulatory requirements and International Standards on Auditing (UK and Ireland).

I report my opinion as to whether the financial statements give a true and fair view, in accordance with Generally Accepted Accounting Practice in Ireland. I also report whether in my opinion proper books of account have been kept. In addition, I state whether the financial statements are in agreement with the books of account.

I report any material instance where moneys have not been applied for the purposes intended or where the transactions do not conform to the authorities governing them.

I also report if I have obtained all the information and explanations necessary for the purposes of my audit.

I review whether the Statement on Internal Financial Control reflects the Institute's compliance with the Code of Practice for the Governance of State Bodies and report any material instance where it does not do so, or if the statement is misleading or inconsistent with other information of which I am aware from my audit of the financial statements. I am not required to consider whether the Statement on Internal Financial Control covers all financial risks and controls, or to form an opinion on the effectiveness of the risk and control procedures.

## BASIS OF AUDIT OPINION

In the exercise of my function as Comptroller and Auditor General, I conducted my audit of the financial statements in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board and by reference to the special considerations which attach to State bodies in relation to their management and operation. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures and regularity of the financial transactions included in the financial statements. It also includes an assessment of the significant estimates and judgments made in the preparation of the financial statements, and of whether the accounting policies are appropriate to the Institute's circumstances, consistently applied and adequately disclosed.

I planned and performed my audit so as to obtain all the information and explanations that I considered necessary in order to provide me with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other

irregularity or error. In forming my opinion I also evaluated the overall adequacy of the presentation of information in the financial statements.

## OPINION

In my opinion, the financial statements give a true and fair view, in accordance with Generally Accepted Accounting Practice in Ireland, of the state of the Institute's affairs at 31 December 2005 and of its income and expenditure for the year then ended.

In my opinion, proper books of account have been kept by the Institute. The financial statements are in agreement with the books of account.



**John Purcell**

*Comptroller and Auditor General  
30 June 2006*

# STATEMENT OF RESPONSIBILITIES OF THE MARINE INSTITUTE

Section 12 of the Marine Institute Act, 1991, requires the Institute to prepare financial statements in such a form as may be approved by the Minister for Communications, Marine and Natural Resources. In preparing those financial statements, the Board of the Institute is required to

- Select suitable accounting policies and apply them consistently
- Make judgements and estimates that are reasonable and prudent
- State whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements
- Prepare the financial statements on a going concern basis unless it is inappropriate to presume that the Institute will continue in operation.

The Institute is responsible for keeping proper books of account which disclose with reasonable accuracy at any time the financial position of the Institute and which enable it to ensure that the financial statements comply with Section 12[1] of the Act. The Institute is also responsible for safeguarding its assets and for taking reasonable steps for the prevention and detection of fraud and other irregularities.

  
**Kevin Bonner**  
Chairman

  
**Mary Dooley**  
Board Member

# STATEMENT ON INTERNAL FINANCIAL CONTROL

On behalf of the Board of the Marine Institute I acknowledge our responsibility for ensuring that an effective system of internal financial control is maintained and operated.

The system can only provide reasonable and not absolute assurance that assets are safeguarded, transactions authorised and properly recorded, and that material errors or irregularities are either prevented or would be detected in a timely period.

The Board has taken steps to ensure an appropriate control environment is in place by:

- Clearly defining management responsibilities and powers
- Establishing formal procedures for monitoring the activities and safeguarding the assets of the organisation
- Developing a culture of accountability across all levels of the organisation.

The Board is in the process of establishing procedures to identify and evaluate business risks by:

- Identifying the nature, extent and financial implication of risks facing the body including the extent and categories which it regards as acceptable;
- Assessing the likelihood of identified risks occurring;
- Working closely with Government and various Agencies to ensure that there is a clear understanding of the Marine Institute's goals and support for the Institute's strategies to achieve those goals.

The system of internal financial control is based on a framework of regular management information, administration procedures including segregation of duties, and a system of delegation and accountability. In particular it includes:

- A comprehensive budgeting system with an annual budget which is reviewed and agreed by the Board,

- Regular reviews by the Board of periodic and annual financial reports which indicate financial performance against forecasts;
- Setting targets to measure financial and other performance;
- Formal project management disciplines.

The Marine Institute has established an internal audit function that operates in accordance with the Framework Code of Best Practice set out in the Code of Practice on the Governance of State Bodies. The work of internal audit is informed by analysis of the risk to which the body is exposed, and annual internal audit plans are based on this analysis. The analysis of risk and the internal audit plan for 2005 was endorsed by the Audit Committee and approved by the Board. The Audit Committee has received the report of internal audit activity in 2005. The report included the Internal Auditor's opinion on the adequacy and effectiveness of the system of internal financial control. The Board's monitoring and review of the effectiveness of the system of internal financial control is informed by the work of the internal auditor, the audit committee which oversees the work of the internal auditor, the executive managers within the Marine Institute who have responsibility for the development and maintenance of the financial control framework, and comments made by the Comptroller and Auditor General in his management letter.

A review of the effectiveness of the system of internal financial controls was carried out in 2005, and was reported to the Board in March 2006.

On behalf of the Board:

  
**Kevin Bonner**  
Chairman : Marine Institute



ACCOUNTING POLICIES

YEAR ENDED 31 DECEMBER 2005

1. GENERAL

The financial statements have been prepared under the accruals method of accounting, except as stated below, and in accordance with generally accepted accounting principles. Financial reporting standards recommended by the recognised accounting bodies are adopted as they become operative.

2. INCOME

Income arising from Oireachtas Grant in Aid is recognised on a cash receipts basis.

3. FIXED ASSETS AND DEPRECIATION

Depreciation is provided on a straight line basis at rates estimated to reduce the assets to their realisable value by the end of their expected lives. The rates in use are stated as follows:

Buildings	2%
Fixtures & Fittings	25%
Computers	33%
Research Vessel	4%
Research Vessel Equipment	25%
Motor Vehicles	20%
Land is not depreciated	

4. LEASED ASSETS

Payments under operating leases (Note 17) are charged to the income and expenditure account in the year to which they elate.

5. CAPITAL ACCOUNT

The Capital Account represents the unamortised value of income applied for capital purposes.

6. FOREIGN CURRENCIES

Monetary assets and liabilities denominated in foreign currencies are translated at the exchange rates ruling at the Balance Sheet date. Revenues and costs are translated at the exchange rates ruling at the dates of the underlying transactions.

7. MARINE RESEARCH TECHNOLOGY DEVELOPMENT INNOVATION PROJECTS (RTDI)

The Marine Institute enters into commitments in respect of contracts awarded for Marine RTDI projects. Expenditure is charged in the financial statements on the basis of initial payments made on signing of the project contract and further payments are charged on receipt and verification of claims in respect of work completed. Costs incurred by the Institute in the administration of RTDI projects are funded by the NDP and charged to the financial statements as they are incurred.

8. DEFERRED FUNDING ASSET FOR PENSIONS

The Marine Institute operates defined benefit pension schemes which are funded annually on a pay as you go basis from monies available to it, including monies provided by the Department of Communications, Marine and Natural Resources .

Pension costs reflect pension benefits earned by employees in the period and are shown net of staff pension contributions which are remitted to the Department of Communications, Marine and Natural Resources. An amount corresponding to the pension charge is recognised as income to the extent that it is recoverable, and offset by grants received in the year to discharge pension payments.

Actuarial gains or losses arising on scheme liabilities are reflected in the Statement of Recognised Gains and Losses and a corresponding adjustment is recognised in the amount recoverable from Department of Communications, Marine and Natural Resources

Pension liabilities represent the present value of future pension payments earned by staff to date. Deferred pension funding represents the corresponding asset to be recovered in future periods from Department of Communications, Marine and Natural Resources.

The provisions of FRS17 on accounting for retirement benefits have been adopted in full for the first time. The effect of this accounting policy is disclosed in note 16 .

INCOME AND EXPENDITURE ACCOUNT

YEAR ENDED 31 DECEMBER 2005

		2005	2004
	Note	€	€
Income			
Oireachtas Grants	2	26,429	22,664
Other Income	3	6,493	5,363
Net Deffered Funding for Pensions	16	1,852	1,202
		34,774	29,229
Transfer (to)/from Capital Account	11	895	2,140
		35,669	31,369
Expenditure			
Corporate Services	4	5,794	5,379
Strategic Planning and Development Services	5	2,642	2,862
Marine Environment and Food Safety Services	6	5,296	4,550
Fisheries Science Services	7	3,485	3,315
Aquaculture and Catchment Management Services	8	2,771	2,527
Ocean Science Services	9	9,791	9,655
Irish Maritime Development Office	10	1,263	991
Pensions Costs	16	1,785	1,144
Total Expenditure		32,827	30,423
Surplus for the year		2,842	946
Surplus at 1 January		6,480	5,534
Surplus at 31 December		9,322	6,480
Statement of Total Recognised Gains and Losses			
Surplus for the year		2,842	946
Experience (Gains)/Losses arising on Pension Scheme Liabilities		78	1,762
Changes in Assumptions			1,420
Deferred Pension Funding		(78)	(3,182)
		2,842	946

The results for the year relate to continuing operations. The Statement of Accounting Policies and Notes 1 – 21 form part of these financial statements.

  
Kevin Bonner  
Chairman

  
Mary Dooley  
Board Member

# BALANCE SHEET

AS AT 31 DECEMBER 2005

	Note	2005		2003	
		€	€	€	€
Fixed Assets					
	12		32,878		33,773
Current Assets					
Debtors & Prepayments	14	3,462		7,834	
Banks and Cash		9,804		1,818	
		13,266			9,652
Current Liabilities					
Creditors & Accruals	15	3,944		3,172	
Net Current Assets			9,322		6,480
Total Assets Less Current Liabilities before Pension					
Deferred Pension Funding		13,900		12,000	
Pension Liabilities		(13,900)		(12,000)	
Net Assets			42,200		40,253
Financed By					
Capital Account	11	32,878		33,773	
Income and Expenditure Account		9,322		6,480	
Total Reserves			42,200		40,253

The Statement of Accounting Policies and Notes 1 - 21 form part of these financial statements.

  
**Kevin Bonner**  
Chairman

  
**Mary Dooley**  
Board Member

# CASH FLOW STATEMENT

FOR THE YEAR ENDED 31 DECEMBER 2005

## RECONCILIATION OF OPERATING SURPLUS TO NET CASH FLOW FROM OPERATING ACTIVITIES

	Note	2005 €	2004 €
Surplus per Income & Expenditure Account		2,842	946
Interest received		(19)	(1)
Transfer (to)/from Capital Account		(895)	(2,140)
Depreciation	12	3,621	3,711
(Increase) in Debtors & Prepayments		4,372	(750)
(Decrease) /Increase in Creditors & Accruals		772	2,076
Net cash inflow from operating activities		10,693	(3,305,327)

## CASH FLOW STATEMENT

	Note	2005 €	2004 €
Net cash inflow from operating activities		10,693	3,842
Returns on investments and servicing of finance			
Interest received		19	1
Net capital expenditure			
Acquisition of fixed assets	12	(2,755)	(1,571)
Disposal of Fixed Assets	12	29	
Increase / (Decrease) in cash		7,986	2,272

## RECONCILIATION OF NET CASH FLOW TO MOVEMENT IN NET FUNDS

	Note	2005 €	2004 €
Increase / (Decrease) in cash		7,986	2,272
Net funds at 1 January		1,818	(454)
Net funds at 31 December		9,804	1,818



# NOTES TO FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2005

## 1. GENERAL

The Marine Institute was established on 30 October, 1992 in accordance with the provisions of the Marine Institute Act, 1991,  
“to undertake, to co-ordinate, to promote and to assist in marine research and development and to provide such services related to marine research and development, that in the opinion of the Institute will promote economic development and create employment and protect the marine environment”.

The Financial Statements cover the Year Ended 31 December 2005

## 2. GRANT IN AID

<b>Current Purposes</b>	€	€		
Marine Institute	18,461			
Less Superannuation contributions repayable*	275	18,186		
<b>Capital Purposes</b>				
National Seabed Survey	3,405			
Marine Institute	838			
Research and Technical Development Infrastructure (RTDI)(Note 13)	4,000	8,243		
		26,429		
*By agreement with the Department of Communications, Marine and Natural Resources this amount is refundable in respect of employee pension contributions				
	2005		2004	
	€	€	€	€
<b>3. OTHER INCOME</b>				
<b>EU Contract Research</b>	1,816		1,806	
Data Directive (see note below)*				
Other	1,153		693	
		2,969		2,499
<b>Other Income</b>				
Research Vessel Charterage	1,112		636	
Databuoy – Department of Finance	455		649	
Information Society – Department of Finance	817		470	
Sundry and Other Contract Income	1,140	3,524	1,109	2,864
Total		6,493		5,363

\* The Data Directive is a European wide Directive establishing a community framework on the collection and management of data needed to conduct the Common Fisheries Policy.

# NOTES TO FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2005

## 4. CORPORATE SERVICES

	2005 €	2004 €
Wages and Salaries	1,084	959
Marine RTDI Fund (2001-2006), National Development Plan (Note 13)	1,260	1,162
Administration	2,920	2,761
Depreciation	530	497
Total	5,794	5,379

Included in the Wages and Salaries in Corporate Services are the employee contributions payable to the Dept of Communications, Marine and Natural Resources in respect of the Marine Institute pension scheme. Administration costs include an audit fee of €9,000 in 2005 (2004 : €5,000)

## 5. STRATEGIC PLANNING AND DEVELOPMENT SERVICES

	2005 €	2004 €
Wages and Salaries	1,051	1,024
Research & Development Programmes	1,080	1,552
Depreciation	511	286
Total	2,642	2,862

## 6. MARINE ENVIRONMENT AND FOOD SAFETY SERVICES

	2005 €	2004 €
Wages and Salaries : Core staff	1,925	1,727
EU Contract Staff	136	70
	2,061	1,797
Research & Development Programmes	3,058	2,223
Depreciation	177	530
Total	5,296	4,550

# NOTES TO FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2005

## 7. FISHERIES SCIENCE SERVICES

	2005	2004
	€	€
Wages and Salaries: Core Staff	904	938
EU Contract Staff	896	849
	1,800	1,787
Research & Development Programmes	1,450	1,263
Depreciation	235	265
Total	3,485	3,315

## 8. AQUACULTURE AND CATCHMENT MANAGEMENT SERVICES

	2005	2004
	€	€
Wages and Salaries: Core Staff	1,150	1,097
EU Contract Staff	72	102
	1,222	1,199
Research & Development Programmes	1,360	1,070
Depreciation	189	258
Total	2,771	2,527

## 9. OCEAN SCIENCE SERVICES

	2005	2004
	€	€
Wages and Salaries	531	439
Administration & Development Programmes	7,285	7,268
Depreciation	1,975	1,948
Total	9,791	9,655

# NOTES TO FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2005

## 10. IRISH MARITIME DEVELOPMENT OFFICE

	2005	2004
	€	€
Wages and Salaries	278	248
Administration & Development Programmes	981	742
Depreciation	4	1
Total	1,263	991

**Summary of Salary Costs** At Dec 2005, The Institute employed 204 staff at a cost of €8.235m. (€7.619m in 2004) of which 147 are core staff and the balance of 57 are contract staff.

## 11. CAPITAL ACCOUNT

	2005	2004
	€	€
Balance at 1 January	33,773	35,912
Transfer (to) from Income and Expenditure Account		
Capital Funding	2,726	1,571
Amortisation in line with Asset Depreciation	(3,621)	(3,710)
Balance at 31 December	32,878	33,773



# NOTES TO FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2005

## 12. FIXED ASSETS

Fixed Assets as stated in the financial statements are made up as follows:

	Land & Buildings €	Research Vessels €	Vessel Equipment €	Fixtures & Fittings €	Computers €	Motor Vehicles €	Total €
<b>Cost or Valuation</b>							
Balance at 1 January 2005	7,015	29,043	1,954	10,729	3,371	206	52,318
Additions at cost	—		272	582	1,837	65	2,756
Disposal						[30]	[30]
<b>Cost at 31 December 2005</b>	<b>7,015</b>	<b>29,043</b>	<b>2,226</b>	<b>11,311</b>	<b>5,208</b>	<b>241</b>	<b>55,044</b>
<b>Depreciation</b>							
Balance at 1 January 2005	844	3,949	1,682	9,057	2,890	123	18,545
Charge for the year	140	1,162	316	1,052	922	41	3,633
Disposal						[12]	[12]
<b>Balance at 31 December 2005</b>	<b>984</b>	<b>5,111</b>	<b>1,998</b>	<b>10,109</b>	<b>3,812</b>	<b>152</b>	<b>22,166</b>
<b>Net Book Value</b>							
<b>At 31 December 2005</b>	<b>6,031</b>	<b>23,932</b>	<b>228</b>	<b>1,202</b>	<b>1,396</b>	<b>89</b>	<b>32,878</b>
At 31 December 2004	6,171	25,094	272	1,672	481	83	33,773

Included in the gross balance of Land and Buildings is an amount of €1,206,251 which represents the professional valuation of the Fisheries Research Centre in Abbotstown, Dublin at 1 January 1996. Title is vested in the Minister for Agriculture and Food. Subsequent to the Government decision to relocate the Marine Institute to Galway it is envisaged that the Abbotstown facility will be vacated in 2006. As a result the professional valuation at 1 January 1996 has not been revised. The remainder of the assets are stated at cost.

# NOTES TO FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2005

## 13. MARINE RTDI FUND (2000-2006), NATIONAL DEVELOPMENT PLAN

The Income and Expenditure in 2005 was as follows:

	2005 €	2004 €
<b>Oireachtas Income</b> <b>(Note 2)</b>	4,000	2,090
Expenditure:		
Projects	975	833
Administration	284	328
<b>Total Expenditure</b> <b>(Note 4)</b>	1,259	1,161
Surplus / (Deficit) in year	2,741	929

The primary objectives of the Marine RTDI Measure are to enhance and consolidate the performance of the marine sector in Ireland through support for R&D and technology transfer activities and provide the RTDI capacity and infrastructure to enable Ireland to fully utilise her marine resource potential in a sustainable manner.

Expenditure comprises PhD Scholarships, Post Doctorate Scholarships, Michael Manahan Fellowship, Desk Studies, Applied/Industry Projects and Networking projects. A total of 171 projects have been supported from 2002 to 2005.

Marine RTDI Projects awarded are subject to contract which specifies that an initial payment will be made on signing of the contract and that further payments will be made on receipt and verification of claims. Expenditure is charged in the financial statements in accordance with Accounting Policy 7.

At 31 December 2005 payments were outstanding on amounts charged to the financial statements as follows (note 15).

	2005 €	2004 €
Amounts Outstanding	115	100

At 31st December 2005 commitments entered into but not yet charged to the financial statements in respect of RTDI projects were €0 with the following breakdown.

	€
Commitments as at 31 December 2004	5,829
Committed in 2005	3,780
Decommitted	[ ]
Paid in 2005	[975]
Commitments as at 31 December 2005	8,634

These commitments figures exclude Marine Institute administration of NDP Projects.

# NOTES TO FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2005

## 14. DEBTORS AND PREPAYMENTS

	2005	2004
	€	€
Trade Debtors	597	466
Contract Income	1,629	1,746
Prepayments	1,236	483
VAT Refund		5,139
	3,462	7,834

Vat Refund: Capital Funding received by the Marine Institute in previous years was used to fund the purchase of the research vessel, *Celtic Explorer*, the cost of which was transferred to the capital account in accordance with the Institute's Accounting Policies. The cost included VAT in the amount of €5.139m. In 2003, the Revenue ruled that the VAT liability on the vessel was zero and the VAT paid was refundable. See also note 11.

## 15. CREDITORS AND ACCRUALS

	2005	2004
	€	€
Trade Creditors	2,611	2,477
Deferred Income	527	
RTDI Accrual (Note 13)	115	100
Accruals	126	80
Payroll	565	515
	3,944	3,172

# NOTES TO FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2005

## 16. SUPERANNUATION

The Marine Institute is a statutory State agency, established under section 3(1) of the Marine Institute Act, 1991 (No. 2 of 1991). Section 9(1) of the Act provides that the Institute shall make schemes for the granting of superannuation benefits to and in respect of staff members, subject to Ministerial approval. Two such approved schemes - the Marine Institute Staff Superannuation Scheme 1998 and the Marine Institute Spouses' and Children's Contributory Pension Scheme 1998 and are being operated by the Institute. The former scheme provides retirement benefits (lump sum and pension) to staff members, and death gratuity benefits in respect of death in service. The latter scheme provides pension benefits for the surviving spouses and dependant children of deceased members.

Both schemes are defined benefit superannuation schemes. Superannuation entitlements arising under the schemes are paid out of current income and are charged to the Income and Expenditure Account, in the year in which they become payable. Staff Superannuation contributions are paid over to the Department of Communications, Marine and Natural Resources.

In common with the generality of public service superannuation schemes, no separate fund is maintained, or assets held, to finance the payment of pensions and gratuities.

For the purposes of reporting in accordance with Financial Reporting Standard 17, Retirement Benefits (transitional arrangements), the Institute has been advised by a qualified actuary. A valuation has been prepared by the actuary in order to assess the liabilities of the superannuation schemes at 31 December 2005.

The major financial assumptions used to calculate liabilities under FRS 17 are as follows:

	2005	2004	2003
Inflation rate increase (a)	2% per annum	2% per annum	2% per annum
Salary rate increase	4% per annum	4% per annum	4% per annum
Pension rate increase	4% per annum	4% per annum	4% per annum
Scheme liabilities discount rate	5.5% per annum	5.5% per annum	5.5% per annum

On the basis of these and other assumptions and applying the projected unit method prescribed in FRS 17, the pension deferred and the pension liability is as follows:

	2004	2003
Total accrued pension liability	€13.9m	€11.9m

(a) As pension increases under the Marine Institute schemes are based on salary increases rather than on price increases, a price inflation assumption is not necessary for the purposes of this valuation. However, since FRS 17 requires reference to an assumed rate of inflation, the above rate would be appropriate for this purpose.



# NOTES TO FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2005

Analysis of the amount which would be charged to operating profit	€
Current Service Cost	1,400
Past Service Cost	—
Interest on pension scheme liabilities	660
Employee Contributions	[275]
	1,785
Analysis of the amount which would be recognised in a statement of total recognised gains and losses (STRGL)	
Experience gains and (losses)	(78)
Changes in assumptions underlying the present value of scheme liabilities	0
Actuarial gain and (loss) recognised in STRGL	(78)
Net Deferred Funding for Pensions in the year	
Current Service and Interest Cost	2,060
Less benefits paid in the year	208
	1,852
The Marine Institute recognises these amounts as an asset corresponding to the unfunded deferred liability for pensions on the basis of the set of assumptions described above and a number of past events. These events include the statutory backing for the superannuation scheme and the policy and practice in relation to funding public service pensions, including contributions from employees and the annual estimates process.The Marine Institute has no evidence that this funding policy will not continue to meet such sums in accordance with current practice. The deferred funding asset for pensions as at 31 December 2005 amounted to €13.9 million (2004: €12.9million) .The quantification of the liability is based on the Financial assumptions set out in this note . The assumptions used,which are based on professional actuarial advice , are advised to the Department of Communications, Marine and Natural Resources but are not formally agreed with the Department.	
Analysis of movement in liability during the year	
Deficit at the beginning of the year	11,970
Current Service Cost	1,400
Interest on Scheme Liabilities	660
Actuarial loss recognised in the STRGL	78
Benefits paid in the year	[208]
Deficit at the end of the year	13,900
Effect of the change in Accounting Policy	
The effect of the change in accounting policy arising from the introduction of FRS17 is to recognise as expenditure in the year the cost of pensions earned rather than the payments made to pensioners and a corresponding funding amount. In addition the Balance Sheet recognises the cumulative liability for pensions earned by employees as at 31 December 2005 together with a corresponding asset, whereas previously such liabilities were disclosed by note only.	

# NOTES TO FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2005

## 17. LEASE COMMITMENTS

### Operating Leases

The operating lease relates to the lease of the premises at 80 Harcourt Street, Dublin 2. The lease is for a period of 22 years from 1 September 1993. The annual rent is €213,000. There is a rent review every 5 years, with lease breaks in the 7th and 14th year. There are eleven staff based in Harcourt Street with an ongoing requirement to accommodate additional staff on an occasional basis. The Institute is actively seeking more appropriate accommodation for its Dublin based activities.

The Marine Institute entered into a five year lease for its temporary premises at Galway. The lease is for a period of 5 years from 1 February 2002. The annual rent is €307,000. There is no rent review. There are lease breaks in the 3rd and 4th year. Following the break in the lease in February 2006 there was a three month extension granted pending the transfer of the Institute to its new premises in Oranmore , Co.Galway and the premises were vacated in May 2006.

### FINANCE LEASES

There was one finance lease commitment at 31 December 2005.

Amounts due within 1 year	€9
Amounts due between 2 and 5 years	€7

## 18. INVESTMENT

The Marine Institute has a 5% shareholding in a company called Wavebob Ltd. This company was established to develop a concept in delivering Wave Energy. The total cost of the investment is €127,000. As it is not possible to accurately assess the value of this investment, the shares are not capitalised in the Balance Sheet.

## 19. JOINT VENTURE - MARINE TECHNICAL AND DEVELOPMENT SERVICES LTD. (MTDS)

The Marine Institute is a partner in a joint venture company, Marine Technical and Development Services Ltd.,which was incorporated in 1998. It holds 51% of the equity capital with the remainder held by Marine Technology Ltd (25%) and another shareholder (24%). MTDS is located in Galway and its primary business is the management, crewing and operation of the research vessels 'Celtic Voyager' and 'Celtic Explorer'. The audited turnover for the year ended 31 December 2005 was €4,898,000 and the profit for the period was €1,000. The total value of transactions entered into with Marine Technical and Development Services Ltd during the period was €4,898,000 excluding VAT. MTDS ceased to trade on the 5th March 2006 and it is the intention of the Board of MTDS that a voluntarily wind-up of the company will commence in 2006.

## 20. REGISTER OF INTERESTS

The Institute has adopted procedures in accordance with the guidelines issued by the Department of Finance in relation to the disclosure of interest by Board members and the Institute has adhered to these procedures. There were no transactions in the year in relation to the Institute's activities in which board members had a beneficial interest.

## 21. BOARD APPROVAL

The financial statements were approved by the Board on the 26th June 2006.

